



SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

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

For the fiscal year ended June 30, 2005

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  
*(State or other jurisdiction of  
incorporation or organization)*

94-3096597  
*(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 75 days. Yes  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.

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Exchange Act). Yes  No

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

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 SmallCap Market) on December 31, 2004 was approximately \$131 million. This computation 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 August 31, 2005, 102,477,553 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 2, 2005	Items 10, 11, 12, 13 and 14 of Part III

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*Except for the historical information presented, the matters discussed in this Report, including our product development and commercialization goals and expectations, revenue expectations, potential market opportunities, our plans and anticipated results of clinical development activities and the potential advantages and applications of our products and product candidates under development, include forward-looking statements that involve risks and uncertainties. Our 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.” Unless the context requires otherwise, references to “we,” “us,” “our” and “Aastrom” refer to Aastrom Biosciences, Inc.*

## PART I

### Item 1. **Business**

We are a development stage company focused on the development of the *ex vivo* production and sale of proprietary human cell products for use in cell therapy and tissue regeneration. Our pre-clinical and clinical product development programs utilize bone marrow-derived adult stem and progenitor cell mixtures being investigated for aiding in the growth of tissues such as bone, vascular tissue and cartilage, as well as blood and immune system cells. We currently operate our business in one reportable segment — research and product development, conducted both on our own behalf and in connection with various collaborative research and development agreements with others, involving the development of proprietary cell-based therapeutics.

In the expanding fields of cell therapy and tissue regeneration, we are developing proprietary adult bone marrow cell-based products, some of which are now in the clinical stage, for the regenerative repair of damaged human tissues and other medical disorders. Our lead products contain Tissue Repair Cells (TRCs), which are a unique mixture of bone marrow-derived adult stem and progenitor cells, produced outside of the body or “*ex vivo*” from a small amount of bone marrow taken from the patient. In clinical trials involving over 180 patients, our TRCs have been demonstrated to be safe and reliable, and appeared to regenerate certain normal healthy human tissues.

We have also developed our proprietary AastromReplicell® System, which is a patented, integrated system of instrumentation and single-use consumable kits for the commercial production of human cells. The AastromReplicell System was developed to provide a manufacturing platform for our proprietary cell products, such as our TRCs. The AastromReplicell System technology has also been applied to the production of dendritic cells and dendritic cell vaccines for third parties requiring automated cell production supporting GMP (Good Manufacturing Practice) compliance. Since this third-party development activity is minimal at present, active development and marketing activities targeting developers of dendritic cells and dendritic cell vaccines have been halted.

Our commercial production pathway for our TRC cell products is in part enabled through the AastromReplicell System platform. This proprietary and automated clinical cell production system combines patented GMP-compliant automated cell production with patented “single-pass perfusion.” Single-pass perfusion is our technology for growing large quantities of highly robust human cells outside the body. These cells include adult stem and progenitor cell mixtures, which are the cells believed to be required for forming tissues such as bone, vascular, cartilage, blood, and immune system cells.

Our primary business model is to establish a core infrastructure for the manufacturing and distribution of TRC cell products for use in multiple medical indications. Initially, we intend to pursue TRC cell products for the following therapeutic areas:

- Local bone regeneration such as is needed in fractures, spinal fusion, and jaw bone reconstruction
- Vascular (blood vessel) regeneration in limb ischemia resulting from diabetes and other diseases

In the future, we may develop and/or support the development by third parties of products for other areas such as cartilage regeneration, cardiac tissue regeneration, and dendritic cell based vaccines.

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We do not have the sales or marketing organization that would be needed to commercialize our therapeutic products. We intend to seek partnerships with other companies who have this capability, as well as to develop our own ability to either support these relationships and, if necessary, to complete some pilot level of sales and marketing activity ourselves.

In the EU, our business development activities are aided through our small, wholly-owned subsidiaries located in Dublin, Ireland and Berlin, Germany.

### **Aastrom's Proprietary Core Technologies**

Our active technology platform consists of two principal components: (i) bone marrow-derived adult stem and progenitor cell mixtures ("Tissue Repair Cells") produced with our proprietary "single-pass perfusion" processes and culture devices, and (ii) the AastromReplicell System, a clinical cell production platform that is designed to standardize and enable an effective GMP-compliant manufacturing pathway for regulated therapeutic cell products. The AastromReplicell System consists of an instrumentation platform that controls the operation of single-use cell production kits that are specific to the desired cell product.

#### ***Tissue Repair Cells ("TRCs")***

Aastrom has developed technology that enables the reliable and safe *ex vivo* production of an enriched mixture of bone marrow-derived early stage cells including stem cells, progenitor cells, and stromal cells. These proprietary cell mixtures are called TRCs, and are produced from a small amount of bone marrow, collected from the patient who will ultimately be treated with the TRC cell product.

Our TRC products are being developed for tissue regeneration applications, to be used if there is a clinical need or benefit of a large volume of bone marrow stem cells that is either not available or would require an invasive collection with associated morbidity. Example indications include regeneration of bone, cartilage, peripheral vascular tissue, cardiac vascular and muscle tissue, and hematopoietic reconstitution.

TRCs have multi-lineage potential, believed similar to native bone marrow cells. In FDA registered multi-center clinical trials, TRCs have been shown to produce a similar engraftment response in cancer patients (who required a bone marrow transplant) receiving either TRCs or a traditional large volume bone marrow transplant. In other clinical studies, TRCs have been shown to be able to induce new bone tissue after systemic infusion or direct surgical application. These clinical results obtained from over 180 patients using *ex vivo*-produced cells, are believed unique to TRCs.

Bone marrow is a source of cells that are in an early stage of development and are capable of maturing into a tissue when provided the proper biological signals by the body. The TRC mixture essentially contains these same cells that may develop into mature human tissue in response to the body's natural direction. If the direction is not given, the cells are believed to typically die or are stored in various tissue sites for later natural use.

Bone marrow is one of the body's natural sources of cells for tissue maintenance and repair. Certain human tissues are more actively involved in regeneration from bone marrow than are others. For example, the bone and the cells of the blood and immune system are believed to be regularly replaced through bone marrow stem cells. However, in certain disease or injury conditions, the body's normal capability is often insufficient to deliver the needed number of bone marrow cells to aid in the repair or regeneration of the tissue. In these cases, collection of a large volume of bone marrow and administering it to the injury site, either alone, or in some cases with a carrier, may overcome the limitation and enable a tissue regeneration capability.

The major limitation in using bone marrow-derived cells is obtaining the number of cells needed for the injured tissue regeneration response. In these situations, one or more liters of bone marrow might be required to obtain the necessary quantity of bone marrow cells. Bone marrow is limited in availability. A maximum of 800ml to 1000ml can typically be obtained, and only then in a full surgical procedure. Therefore, the use of bone marrow for tissue regeneration has been limited. TRCs are intended to overcome this limitation, by providing a high number of bone marrow cells sourced from a small aspirate of the patient's own bone marrow.

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The mechanism of action for our TRC products is to provide normal bone marrow cells to a tissue site for the site to utilize the cells in a naturally directed process of tissue formation.

### ***Aastrom's Single-Pass Perfusion for Human Cell Growth***

We have 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. This proprietary process is called "single-pass perfusion" and provides a cell culture environment that mimics the biology and physiology of natural bone marrow outside of the body. This process enables the production of stem, and early- and late-stage progenitor cells needed for an effective bone marrow stem cell therapy procedure. When the single-pass perfusion process is applied to other mature cell types, the resulting cell product appears to have enhanced biologic function as compared to cells produced through standard static culture processes. For example, in pre-clinical studies performed at Aastrom, T-cells produced using our proprietary processes appear to have a significantly higher replicative capability. Further, dendritic cells produced using this process appears to have an enhanced ability to present antigen to the immune system. We believe that these benefits may improve the overall clinical effectiveness of these procedures.

TRCs are produced using our proprietary single-pass perfusion process in a controlled cell culture environment. The culture process uses a standard non-proprietary cell culture medium with various commercial supplements. As is typical of most human cell culture processes, the current TRC production process uses animal serum supplements (fetal bovine serum and horse serum) which are commercially obtained. We have also evaluated the addition of different growth factors supplements to determine if these agents can enhance the production of desired cell types. The single-pass perfusion process was demonstrated to enhance stem and progenitor cell replication without the addition of cytokines or growth factors, so it is not certain whether these agents are useful for TRC production for effective clinical use. The TRCs that were used in most of the past clinical trials were produced using certain growth factors. More recent trials are evaluating TRCs produced without the addition of exogenous growth factors. It is not yet known if there is a difference in the clinical activity of these different cell preparations. Any such differences may delay the clinical development process of TRCs.

Other currently available cell culture methods tend to result in a loss of stem cells, either through death or through differentiation into mature cells. When compared with cells grown using standard cell culture techniques, our single-pass perfusion approach enables stem cells to replicate, and appears to improve the growth and biological function of other types of human cells as well. We have exclusive rights to several issued U.S. patents that cover these processes, cell compositions and therapeutic uses of these compositions.

We have also developed a proprietary cell culture chamber to implement our process technology. The culture chamber can produce cells on a clinical-scale and allows for recovery of the cells for therapeutic use. Our pre-clinical and clinical data indicate that our cell culture chamber may be used for growing various types of human therapeutic cells, such as stem cells, T-cells and dendritic cells used for immunotherapies, chondrocytes for cartilage replacement, and mesenchymal cells for bone and cartilage replacement. We hold exclusive rights to issued U.S. and foreign patents, and additional patent applications submitted, for our cell culture processes and cell culture chamber device technologies.

### ***The AastromReplicell System***

The AastromReplicell System is our proprietary clinical-scale cell production platform to enable the large scale *ex vivo* production of our therapeutic cells. We plan to limit our marketing efforts promoting the AastromReplicell System as a stand-alone product. Rather our focus is on utilizing the AastromReplicell System technology in cell manufacturing facilities to support our TRC development programs.

The AastromReplicell System has been designed to implement our proprietary bone marrow cell growth process as well as processes for the production of certain other cell types. The AastromReplicell System is comprised of several components, including microprocessor-controlled instruments and single-use cell production kits for production of our TRC products, as well as dendritic cells for the production of vaccines. The single-use cell production kits include an AastromReplicell System Cell Cassette cartridge containing our

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proprietary cell culture chamber, supply and waste reservoirs, and harvest bag along with process specific software which provides the cell production processing parameters to the AastromReplicell System instruments. The microprocessor-controlled instruments include the AastromReplicell System Incubator which controls the culture conditions for the production of cells within the Cell Cassette, and the AastromReplicell System Processor which automates the procedure sequences such as the inoculation of cells into, and harvesting of the cells from, the Cell Cassette. The AastromReplicell System Manager provides our proprietary user interface software operated on a Windows-based personal computer that monitors the cell production process in multiple Incubators, records relevant process variables and operator actions, and automatically generates cell production batch records.

The AastromReplicell System is designed to be operated with minimal operator activity by a qualified cell production or cell processing technician to implement clinical-scale cell production. The endpoint of the AastromReplicell System process is a bio-compatible bag containing the specific cell product. The control and documentation features of the AastromReplicell System have been designed to meet GMP requirements for the production of cells for clinical use. The System can be scaled-up to simultaneously produce multiple, independent cell batches.

The typical industry approach to growing human cells has largely used manual research laboratory methods, requiring substantial time and technical expertise. The AastromReplicell System is designed to provide closed-system, automated cell production capabilities in compliance with regulatory requirements and international standards, with high process reliability and reduced requirements for specialized facilities and staffing.

The AastromReplicell System is one configuration for our proprietary cell production technologies. We expect to develop new configurations for centralized manufacturing to enable process and cost efficiencies associated with large-scale manufacturing.

## **Product Development**

### ***Tissue Repair Cell Products***

Our current product development efforts are focused on the development of bone marrow-derived adult stem and progenitor cells — TRCs — for use in bone-related indications (bone grafting, spine fusion and jaw bone reconstruction) and for use in vascular system regeneration. Our TRCs have been introduced into human patients in previous trials for bone marrow transplantation. (See “Clinical Development.”). Clinical trials are underway to evaluate the ability of TRCs to produce bone formation in patients with long bone fractures and jaw bone reconstruction, and clinical protocols have been submitted to regulatory agencies for spine fusions and other orthopedic indications, and for treating limb ischemia resulting from peripheral arterial disease. We believe that additional clinical indications may be treatable with TRCs. Additional trials will be required to prove out these beliefs.

Our research programs are currently developing and evaluating new variations of TRCs that are intended to improve the functionality for certain clinical indications, to improve shelf life, and to decrease the cost of manufacturing our TRC products. Programs are also exploring the capability of TRCs to generate different types of human tissues. These production process changes may alter the functionality of our TRCs, and would require various levels of experimental and clinical testing and evaluation. Any such testing or clinical study may lengthen the time before TRC products would be commercially available. One of the new TRC variations involves a production process that does not use exogenous growth factors or cytokines.

Research and development expenses for the fiscal years ended June 30, 2003, 2004 and 2005 were \$5,647,000, \$6,289,000 and \$7,206,000, respectively.

## **Clinical Development**

Currently, our clinical trial direction is focused on the utilization of our TRCs in the areas of bone regeneration and vascular regeneration in limb ischemia resulting from diabetes and other diseases. Both of these therapeutic areas are believed to have substantial market opportunities.

### ***Current Activities***

The pre-clinical and clinical data for our TRCs have shown a substantial increase in the stem or progenitor cells that can develop into either hematopoietic or mesenchymal types of tissues as well as certain key populations of stromal progenitor cells. Stromal (or mesenchymal) cells are integral for bone marrow to generate non-hematopoietic tissues such as bone and cartilage. We demonstrated in the laboratory, and in mice, that our TRC products are capable of forming bone cell lineages. Based on these and other pre-clinical and clinical observations, we initiated clinical trials in the U.S. and European Union (EU) for bone regeneration in patients with severe long bone fractures.

The U.S. Phase I/ II clinical trial for the treatment of severe long bone non-union fractures is being actively conducted under an FDA-approved Investigational New Drug (IND) application, at multiple centers with enrollment of up to 20 patients. Enrollment is open for this trial at the following sites: Lutheran General Hospital, Park Ridge, IL, the University of Michigan Health System, Ann Arbor, MI, William Beaumont Hospital, Royal Oak, MI, Lutheran Medical Center, Brooklyn, NY and the University of Nebraska Medical Center, Omaha, NE. We expect to accrue and treat these 20 patients by the end of calendar year 2005. It is probable that we will seek to expand this trial to gain further experience and information using TRCs in bone grafting.

The studies in the EU were initiated at centers in Spain and Germany, under Ethical Committee approvals. These Phase I/ II or “proof of concept” type clinical trials for the use of TRCs in bone grafting of long bone non-union fractures are under protocols specific to their individual sites, and these protocols have differences compared to the U.S. clinical trial protocol. The differences generally relate to the type of carrier matrix, or material, that our TRCs are mixed with prior to the application at the bone repair site. There are also differences in the type of clinical injury being treated among the U.S., Spain and Germany trial sites.

Results from the feasibility clinical trial in Spain have been disclosed. The report stated that all of the patients treated with our TRCs exhibited clinical and functional healing, with 5 of 6 treatments showing bone regeneration at the fracture site as determined by radiographic imaging by 6 months. The trial, conducted at Hospital General de l’Hospitalet, Centro Médico Teknon and Hospital de Barcelona-SCIAS, accrued 5 patients, with one patient receiving treatment for two separate fractures, for a total of 6 different treatments. All patients had severe non-union fractures of a long bone (3 tibia, 2 humeri, 1 clavicle), which had failed to heal in previous standard of care treatments. The patients all underwent open surgery to apply a metal plate internal fixation (replacing previous failed fixation) and our TRCs, to aid in the local bone regeneration. The TRCs were mixed with synthetic commercial matrix and an autologous fibrin, and applied directly at the fracture site. There are ongoing post-surgical evaluations of all patients using standard clinical and radiographic evaluations of the healing fracture site. When these results were disclosed, two of the patients had been evaluated for more than one year after surgery, and a third patient had been monitored for more than 8 months. No complications or treatment-associated adverse effects have been observed. We have applied to the Spanish Drug Agency (AEMPS) to commence another non-union fracture bone graft trial in Spain, approval for which is pending. Two patients at the German site, who had been previously treated for leg lengthening (osteogenic distraction) that did not form bone, also did not exhibit new bone formation after the experimental TRC therapy. The expanded clinical phases will also evaluate the TRCs produced without the use of exogenous growth factors or cytokines.

With the safety and bone regeneration results obtained from the fracture trials, we initiated a jaw (maxilla) bone regeneration clinical trial for patients in need of a sinus lift procedure for dental implants at the site in Spain. This trial has been initiated and has enrolled the targeted 5 patients for the evaluation of bone regeneration resulting from TRCs compared with a standard bone grafting procedure. Each patient was treated with both procedures, in different locations of the maxilla. Initial results from this trial are expected by the end of calendar year 2005.

We also have entered into a clinical trial agreement with the Heart & Diabetes Center located in Bad Oeynhausen, Germany to complete a pilot trial to evaluate the safety and potential beneficial effect of TRCs on the vasculature of diabetic patients with limb ischemia. An approved Investigational Medicinal Product

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Dossier (IMPD) and the cell manufacturing permits now required in Germany have been obtained by the clinical site, and the trial will begin by the end of calendar year 2005.

We are developing clinical protocols to evaluate TRCs in the fusion of the spine vertebrae through new bone growth, for separate trials in the U.S. and the EU. The IND application for the U.S. study has been submitted, and we are preparing a submission to the authorities in Spain.

The preliminary results of our 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, our pre-pivotal or pivotal trials may not be successful, and we may not be able to obtain the required Biologic License Application (BLA) registration or required foreign regulatory approvals (Marketing Authorization) for our TRCs in a timely fashion, or at all. See "Business Risks."

In certain non-U.S. regions, autologous cell products such as TRCs may be marketed without further registration permits. We are exploring these types of markets through commercial collaboration agreements to gain additional clinical information with the potential of limited early revenues. We have completed one limited commercial evaluation agreement under this type of arrangement. Growth of this market would also require the establishment of additional cell manufacturing capacity.

### **Strategic Relationships**

In June 2003, we announced a strategic alliance with the Musculoskeletal Transplant Foundation (MTF) to jointly develop and commercialize innovative treatments for the regeneration of tissues such as bone and cartilage. The collaboration aligns us with the leading provider of allograft, or donor-derived tissue materials (matrices) with a focus on forming a coordinated business and clinical approach for new products and treatments needed in orthopedic medicine. Under the terms of the alliance, Aastrom and MTF will coordinate and fund the development of products that are based on combinations of MTF's allograft matrices and our TRCs. The companies will both contribute in certain development and clinical trial expenses of these treatment approaches and products, and intend to adopt a coordinated promotion and marketing strategy for these product combinations.

### **Manufacturing**

#### ***Cell Manufacturing***

Aastrom's TRC cell products will be regulated in the U.S., EU and other markets as biologics/pharmaceuticals. With this classification, commercial manufacturing of TRCs will need to occur in licensed facilities under Good Tissue Practice (GTP) in the U.S., and Good Manufacturing Practice (GMP) outside the U.S., guidelines for biologics (cellular products) or drugs.

In February 2005, we entered into a consulting agreement with the Fraunhofer Institute in Stuttgart, Germany to establish a licensed pilot manufacturing facility for the production of TRC cell products. The license when issued, if at all, will be held by Aastrom, and the Fraunhofer facility and staff will be contracted for the manufacture of TRC products for clinical trials and initial commercial activity under the license. This facility will not have large-scale manufacturing capabilities.

In the U.S., we have established and operate a pilot cell manufacturing facility in our Ann Arbor location, to support the current U.S. clinical trials. We intend to establish and operate our own larger commercial-scale cell manufacturing facilities for the EU and U.S. markets in the future to accommodate potential market growth.

#### ***AastromReplicell System Components***

We have established relationships with manufacturers that are FDA registered as suppliers of medical products to manufacture various components of the AastromReplicell System.

In March 2003, we signed a three-year master supply agreement with Astro Instrumentation, L.L.C., to manufacture our final assemblies, component parts, subassemblies and associated spare parts, used in the

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instrumentation platform of our AastromReplicell System. We retain all proprietary rights to our intellectual property that is utilized by Astro pursuant to this agreement.

In March 1996, we entered into a License and Supply Agreement with Immunex Corporation, now a wholly owned subsidiary of Amgen Corporation, for an initial five-year term to purchase and resell certain cytokines and ancillary materials for use in conjunction with the AastromReplicell System. Subsequently, this license agreement was extended through March 2003. We are currently negotiating a new agreement with Amgen. In the event that Amgen elects to cease to supply to us cytokines and ancillary materials or is prevented from supplying such materials to us, there is no assurance that we could successfully manufacture the compounds ourselves or identify others that could manufacture these compounds to acceptable quality standards and costs, if at all. However, we are currently conducting pre-clinical and clinical research to evaluate the elimination of these components.

In February 2004, we entered into a five-year agreement continuing Moll Industries as our supplier of Cell Cassettes. Under this agreement, Moll will perform manufacturing and assembly of our Cell Cassette, the main single-use component of the AastromReplicell System. We retain all proprietary rights to our intellectual property that is utilized by Moll pursuant to this agreement.

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

### **Patents and Proprietary Rights**

Our success depends in part on our ability, and the ability of our licensors, to obtain patent protection for our products and processes. We have exclusive rights to over 25 issued U.S. patents, and non-exclusive rights to one other issued U.S. patent. These patents present various claims related to the following, as well as other, areas: (i) certain methods for enabling *ex vivo* stem cell division (for cells derived from bone marrow, peripheral blood, umbilical cord blood, or the spleen) or improving the *ex vivo* production of progenitor cells, and the therapeutic use of these cells where normal bone marrow has a therapeutic effect; (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 and have been originally derived from bone marrow, peripheral blood, umbilical cord blood, or the spleen. Certain patent equivalents to the U.S. patents have also been issued in other jurisdictions including Australia and Canada and under the European Patent Convention. Certain of these foreign patents are due to expire beginning in 2008. In addition, we and our exclusive licensors have filed applications for patents in the U.S. and equivalent applications in certain other countries claiming other aspects of our products and processes, including a number of U.S. patent applications and corresponding applications in other countries related to various components of the AastromReplicell 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 by us, or our licensors, will be issued, that the scope of any patent protection will exclude competitors or provide competitive advantages to us, that any of the patents that have been or may be issued to us or our 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 us. Furthermore, there can be no assurance that others have not developed or will not develop similar products, duplicate any of our products or design around any patents that have been or may be issued to us or our licensors. Since patent applications in the U.S. are maintained in secrecy until shortly before a patent's issuance, we also cannot be certain that others did not first file applications for inventions covered by our and our licensors' pending patent applications, nor can we be certain that we will not infringe any patents that may be issued to others on such applications.

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We rely on certain licenses granted by the University of Michigan and others for certain patent rights. If we breach such agreements or otherwise fail to comply with such agreements, or if such agreements expire or are otherwise terminated, we may lose our rights in such patents, which would have a material adverse affect on our business, financial condition and results of operations. See “Research and License Agreements.”

We also rely on trade secrets and unpatentable know-how that we seek to protect, in part, by confidentiality agreements. It is our policy to require our 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 us. These agreements provide that all confidential information developed or made known to the individual during the course of the individual’s relationship with us is to be kept confidential and not disclosed to third parties except in specific limited circumstances. We also require signed confidentiality or material transfer agreements from any company that is to receive our 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 us shall be assigned to us as the exclusive property of Aastrom. There can be no assurance, however, that these agreements will not be breached, that we would have adequate remedies for any breach, or that our trade secrets or unpatentable know-how will not otherwise become known or be independently developed by competitors.

Our success will also depend in part on our ability to develop commercially viable products without infringing the proprietary rights of others. We have 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 affect on our ability to market our products or maintain our competitive position with respect to our products. If our technology components, devices, designs, products, processes or other subject matter are claimed under other existing U.S. or foreign patents, or are otherwise protected by third party proprietary rights, we may be subject to infringement actions. In such event, we may challenge the validity of such patents or other proprietary rights or we may be required to obtain licenses from such companies in order to develop, manufacture or market our products. There can be no assurances that we 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 our proposed products or the inability to proceed with the development, manufacture or sale of products requiring such licenses, which could have a material adverse affect on our business, financial condition and results of operations. If we are required to defend ourselves against charges of patent infringement or to protect our proprietary rights against third parties, substantial costs will be incurred regardless of whether we are successful. Such proceedings are typically protracted with no certainty of success. An adverse outcome could subject us to significant liabilities to third parties and force us to curtail or cease our development and sale of our products and processes.

Certain of our and our 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 us to grant an exclusive license under any of such inventions to a third party if the government determines that: (i) adequate steps have not been taken to commercialize such inventions, (ii) such action is necessary to meet public health or safety needs, or (iii) such action is necessary to meet requirements for public use under federal regulations. Additionally, under the federal Bayh Dole Act, a party which acquires an exclusive license for an invention that was partially funded by a federal research grant is subject to the following government rights: (i) products using the invention which are sold in the U.S. are to be manufactured substantially in the U.S., unless a waiver is obtained; (ii) the government may force the granting of a license to a third party who will make and sell the needed product if the licensee does not pursue reasonable commercialization of a needed product using the invention; and (iii) the U.S. Government may use the invention for its own needs.

### ***Research and License Agreements***

In March 1992, we entered into a License Agreement with the University of Michigan, as contemplated by a Research Agreement executed in August 1989 relating to the *ex vivo* production of human cells. Pursuant to this License Agreement, as amended: (i) we 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 of Michigan's research project or which resulted from certain further research conducted through December 1994; and (ii) we are obligated to pay to the University of Michigan a royalty equal to 2% of the net sales of products which are covered by the University of Michigan's patents. Unless it is terminated earlier at our option or due to a material breach by us, the License Agreement will continue in effect until the latest expiration date of the patents to which the License Agreement applies.

In December 2002, we entered into an agreement with Corning Incorporated that granted them an exclusive sublicense relating to our cell transfection technology for increased efficiency in loading genetic material into cells. We own the intellectual property rights to methods, compositions and devices that increase the frequency and efficiency of depositing particles into cells to modify their genetic code. Under terms of the agreement, Corning's Life Sciences business will utilize our unique technology to enhance the development of their molecular and cell culture applications in areas that are not competitive to our core business interest. We retain exclusive rights to the applications of the technologies involving cells for therapeutic applications, and received an upfront payment in addition to future royalties we may receive from Corning. Corning is currently in the development stage for products subject to this license.

### **Government Regulation**

Our research and development activities and the manufacturing and marketing of our products are subject to the laws and regulations of governmental authorities in the U.S. and other countries in which our products will be marketed. Specifically, in the U.S., the FDA, among other activities, regulates new product approvals to establish safety and efficacy of these products. Governments in other countries have similar requirements for testing and marketing. In the U.S., in addition to meeting FDA regulations, we are 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***

Our products are subject to regulation as biological products under the Public Health Service Act and the Food, Drug and Cosmetic Act. Different regulatory requirements may apply to our products depending on how they are categorized by the FDA under these laws. The FDA has indicated that it intends to regulate the cells produced in the AastromReplicell System as a licensed biologic through the Center for Biologics Evaluation and Research. However, there can be no assurance that the FDA will ultimately regulate Aastrom's products in this manner.

As current regulations exist, the FDA will require regulatory approval for certain human cellular- or tissue-based products, including cells produced in the AastromReplicell System, through a BLA.

The FDA has published the GTP regulations which require registration of facilities that manufacture or process cellular products and specific manufacturing practices to assure consistent finished cellular products. We believe that the automated and fixed process using single-use sterile disposables to produce our cell products will assist in meeting these requirements.

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

Regardless of how our 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, record-keeping, approval, distribution, use, product 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 us to enter into government supply contracts, withdrawal of previously approved applications and criminal prosecution.

### ***Product Approval in the United States***

In order to obtain FDA approval of a new medical product, sponsors must submit proof of safety and efficacy. In some cases, such proof entails extensive pre-clinical and clinical 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 we may encounter significant difficulties or costs in our efforts to obtain FDA approvals, in turn, which could delay or preclude us from marketing any products we may develop. The FDA may also require post-marketing 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 applicable regulations are not maintained or if problems occur following commercialization. For patented technologies, delays imposed by the governmental approval process may materially reduce the period during which we will have the exclusive right to exploit such technologies.

If human clinical trials of a proposed medical product are required, the manufacturer or distributor of a drug or biologic will have to file an Investigational New Drug (IND) submission with the FDA prior to commencing human clinical trials. The submission must be supported by data, typically including the results of pre-clinical and laboratory testing. Following submission of the IND, the FDA has 30 days to review the application and raise safety and other clinical trial issues. If we are 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. We have submitted several Investigational Device Exemptions (IDEs) and INDs for the AastromReplicell System and TRC cell products produced in the System, and have conducted clinical studies under these IDEs and INDs.

The cells produced in the AastromReplicell System will be regulated by the FDA as a licensed biologic, although there can be no assurance that the FDA will not choose to regulate this product in a different manner in the future. The FDA categorizes human cell- or tissue-based products as either minimally manipulated or more than minimally manipulated, and has determined that more than minimally manipulated products require clinical trials to demonstrate product safety and efficacy and the submission of a BLA for marketing authorization. For products which may be regulated as biologics, the FDA requires: (i) pre-clinical laboratory and animal testing; (ii) submission to the FDA of an IND application which must be approved 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 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.

Pre-clinical testing covers laboratory evaluation of product chemistry and formulation as well as any 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, and as stated above, the FDA has 30 days to review the application and raise safety and other clinical trial issues. If we are not notified of objections within that 30-day period, clinical trials may be initiated. Clinical trials are typically conducted in one to 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, and where appropriate to ascertain dose tolerance and the optimal dose range and to gather additional data relating to safety and potential adverse affects. 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 us to discontinue the trials at any time if there are significant safety issues.

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The results of the pre-clinical 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 events, which can involve significant expense.

Under current requirements, facilities manufacturing biological products must be licensed. To accomplish this, a BLA must be filed with the FDA. In addition to the pre-clinical and clinical studies, the BLA includes a description of 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 GMPs/GTPs 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 the 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 new EU Directives (laws) have become effective, and have influenced the requirements for manufacturing cell products and the conduct of clinical trials. These changes have delayed or in some cases temporarily halted clinical trials in the EU. The recent changes to the European Union Medicinal Products Prime Directive shifted patient-derived cells to the medicinal products category. These new laws have also caused delays to our current planned clinical trials in the EU.

### ***Clinical Trials in the European Union***

In order to obtain approval of a new medicinal product in the EU, sponsors must submit proof of safety and efficacy to the European Medicines Agency (EMA). In some cases, such proof entails extensive pre-clinical and clinical tests. The required testing and preparation for necessary applications and processing of those applications by the EMA is expensive and may take several years to complete. There can be no assurance that the EMA will act favorably or in a timely manner in reviewing submitted applications, and we may encounter significant difficulties or costs in our efforts to obtain EMA approvals. In turn, this could delay or preclude us from marketing any products we may develop. The EMA may also require post-marketing 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 applicable regulations are not maintained or if problems occur following commercialization.

If human clinical trials of a proposed medicinal product are required, the manufacturer or sponsor will have to file an Investigational Medicinal Product Dossier (IMPD) submission with the Competent Authority of each EU Member State (MS) in which it intends to conduct human clinical trials. The submission must be supported by data, typically including the results of pre-clinical and laboratory testing. Following submission of the IMPD, the MS Competent Authority has 90 days to review the application and raise safety and other clinical trial issues. The EU Clinical Directive allows the Competent Authority to extend this review period if it deems it necessary for the safety of the patient or it needs additional time to conduct a thorough review. The Bad Oeynhausen site that will conduct the vascular study has received approval for its IMPD. We have submitted an IMPD to the Spanish Drug Agency to commence another non-union fracture bone graft trial, approval for which is pending.

To conduct a clinical trial in the EU, the study product must be manufactured in a GMP licensed facility. Currently, the Bad Oeynhausen site that will conduct the vascular clinical study has received its GMP license

to manufacture TRCs using the AastromReplicell System. The clinical site in Spain has been granted a waiver to the GMP license requirements.

### ***Product Approval in the European Union***

Under the current EU drug directive, our TRC cell products will be regulated as a medicinal product. For products which are regulated as a medicinal product, the EU Directive requires: (i) pre-clinical laboratory and animal testing; (ii) submission of an IMPD to one or more MS Competent Authority, where the clinical trial will be conducted, which must be approved 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 EMEA for a Marketing Authorization (MA); and, (v) review and approval of the MA. Although an MS is currently allowed to independently approve medicinal products, the trend for cellular products is to allow the EMEA to provide a “centralized” review of the submission.

The EMEA is currently reviewing changes to the regulatory requirements for somatic cellular products and other Advanced Technology Products which could have significant effects on the requirements for our MA submissions. We do not know if or when these changes will occur, if at all, or what effect they may have on cellular products that may have previously been approved, or submissions that are under review, when the regulation is approved and becomes effective.

Some MSs currently do not require an MA for commercialization of autologous somatic cellular products (e.g., TRCs). Germany is one such MS which does not require an MA to distribute autologous cellular products. The status in Germany is likely to change when the Government issues a revision to its Drug Laws. When the new revised law becomes effective, provided that we have introduced a product into the German market, we will likely be “grandfathered” for some period of time before we would need to apply for a centralized MA.

The AastromReplicell System instruments and disposables are currently being regulated in Europe as a Class I Sterile, Class IIb or Class III medical device, under the authority of the Medical Device Directive (MDD) implemented by each EU MS. To distribute medical devices in the EU, the product must have been issued a CE Certificate.

The MDD vests 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 Competent Authority of the MSs within 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 given the responsibility for determination of the appropriate standards to apply to a medical device. Receipt of permission to affix the CE Mark enables a company to sell a medical device in all EU MSs. Other registration requirements may also need to be satisfied in certain countries.

We have received permission from our Notified Body (The British Standards Institute) to affix the CE Mark to the AastromReplicell System instrumentation and components. There can be no assurance that the AastromReplicell System will continue to be regulated under its current status. Any status change could affect our ability to produce our TRC products and adversely affect our business, financial condition and results of operations.

### **Competitive Environment**

The biotechnology and medical device industries are characterized by rapidly evolving technology and intense competition. Our competitors include major multinational medical device companies, pharmaceutical companies, specialty biotechnology companies and chemical and medical products companies operating in the fields of tissue engineering, tissue regeneration, orthopedics, and in a small number of instances, cell-based therapies. Many of these companies are well-established and possess technical, research and development, financial, and sales and marketing resources significantly greater than ours. In addition, many smaller biotech and specialty medical products companies have formed strategic collaborations, partnerships and other types

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of joint ventures with larger, well established industry competitors that afford these companies potential research and development and commercialization advantages in product areas currently being pursued by us. Academic institutions, governmental agencies and other public and private research organizations are also conducting and financing research activities which may produce products directly competitive to those being commercialized by us. Moreover, many of these competitors may be able to obtain patent protection, obtain FDA and other regulatory approvals and begin commercial sales of their products before us.

Our potential commercial products address a broad range of existing and emerging markets, in which cell-based therapy is a new and as of yet, unproven, commercial strategy. In a large part, we face primary competition from existing medical devices and drug products. Some of our competitors in orthopedic device and tissue engineered orthopedic applications have longer operating histories and substantially greater resources. These include Biomet, J&J/ DePuy, Medtronic, Smith & Nephew, Stryker, Synthes, Wright Medical and Zimmer. A number of other competitors are active in orthopedics with a variety of tissue-derived and tissue substitution products. These competitors include both large companies with significantly greater resources and small companies, such as Allosource, Anika Therapeutics, ApaTech, Berkley Advanced Biomaterials, Biocomposites, Cerabio, CONMED, Cortek, CryoLife, Etex, Exactech, Geistlich, IsoTis Orthobiologics, Kensey Nash, Lifecell Corporation, LifeCore Biomedical, Millenium Biologix, NovaBone, NuVasive, Orthovita, OsteoBiologics, Osteotech, Regeneration Technologies, Spine Concepts and U.S. Biomaterials.

In the general area of cell-based therapies, including orthopedics and other tissue regeneration applications, we potentially compete with a variety of companies, most of whom are specialty medical products or biotechnology companies. Some of these, such as Genzyme, J&J/ Cordis and Fidia SA are well-established and have substantial technical and financial resources compared to ours. However, as cell-based products are only just emerging as viable medical therapies, many of our most direct competitors are smaller biotechnology and specialty medical products companies. These include Biosyntech, Cells4Health, Co.don, Cytori Therapeutics, Isolagen, Isto Technologies, Orthologic Corp. and Osiris Therapeutics, Inc.

Domestic product sales and rentals for the fiscal years ended June 30, 2003, 2004 and 2005 were \$0, \$10,000 and \$194,000, respectively. Foreign product sales and rentals for the fiscal years ended June 30, 2003, 2004 and 2005 were \$314,000, \$39,000 and \$193,000, respectively.

### **General**

We cannot project when we will generate positive cash flows from our consolidated operations. In the next several years, we expect that our revenue sources will consist of modest sales of cell therapy kits at irregular intervals to academic research centers, commercial evaluations, grant revenue, research funding, licensing fees from potential future corporate collaborators and interest income. To date, we have financed our operations primarily through public and private sales of our equity securities. As a development-stage company, we have never been profitable and do not anticipate having net income unless and until significant product sales commence. Achieving this objective will require significant additional funding. Our ability to achieve profitability on a sustained basis, if at all, or to obtain the required funding to achieve our operating objectives, or complete additional corporate partnering transactions is subject to a number of risks and uncertainties. Please see the section entitled "Business Risks".

### **Employees**

As of August 31, 2005, we employed approximately 49 individuals on a full time equivalent basis. A significant number of our management and professional employees have had prior experience with pharmaceutical, biotechnology or medical product companies. None of our employees are covered by collective bargaining agreements, and management considers relations with our employees to be good.

**Executive Officers of Aastrom**

Our executive officers, and their respective ages as of August 31, 2005, are as follows:

<u>Name</u>	<u>Age</u>	<u>Position</u>
R. Douglas Armstrong, Ph.D.	52	Chief Executive Officer and Chairman of the Board of Directors
Robert J. Bard, J.D., R.A.C.	54	Vice President Regulatory Affairs and Quality Systems
Gerald D. Brennan, Jr., J.D.	54	Vice President Administrative and Financial Operations and Chief Financial Officer
James A. Cour	49	President and Chief Operating Officer
Brian S. Hampson	48	Vice President Product Development
Janet M. Hock, B.D.S., Ph.D.	61	Vice President Global Research and Chief Scientific Officer

*R. Douglas Armstrong, Ph.D.* joined Aastrom in June 1991 as its President and Chief Executive Officer, and as a Director. In 1999, Dr. Armstrong was elected Chairman of Aastrom's Board of Directors. In July 2004, the duties and responsibilities of President were transferred to the Company's new Chief Operating Officer, allowing Dr. Armstrong, as CEO, to increase focus on strategic activities and issues, investor relations, the Board of Directors, and Aastrom's European operations. From 1987 to 1991, Dr. Armstrong served as Executive Vice President and Trustee at the La Jolla Cancer Research Foundation (LJCRF), now named the Burnham Institute, a scientific research institute located in San Diego, CA. Prior to joining the Burnham Institute, Dr. Armstrong held various faculty and staff positions at the Yale University School of Medicine, University of California, San Francisco, LJCRF and the University of Michigan. Dr. Armstrong received a Bachelor's of Arts degree in Chemistry from the University of Richmond in Richmond, VA, and completed his Doctorate in Pharmacology and Toxicology from the Medical College of Virginia. Additionally, Dr. Armstrong was a participant in the formation of Telios Pharmaceuticals, Inc., has served on the boards of both biotechnology and venture capital organizations.

*Robert J. Bard, J.D., R.A.C.* joined Aastrom in October 2002 as its Vice President Regulatory Affairs & Quality Systems, with over 31 years of extensive domestic and international regulatory experience in the biotechnology sector. Prior to joining Aastrom, Mr. Bard served in several senior management capacities for a number of other companies in the medical industry, including: Gliatech, Inc., McKinley Medical, LLLP, I-Flow Corp., IVAC Corp. and Ultra Medical Devices, Inc., where he was responsible for regulatory compliance, quality assurance and manufacturing operations for biotech pharmaceuticals and medical devices. Mr. Bard earned a law degree from the American College of Law, and has a B.S. in Microbiology, with a minor in Biological Chemistry, from the University of California-Los Angeles. In addition, he has studied Pharmaceutical Sciences at Idaho State University and Mechanical Engineering at California State University-Long Beach. Mr. Bard is a member of the California Bar. He completed his ISO 9001 Lead Assessor Training in 1995, is a certified member of the Regulatory Affairs Professional Society, and is an ASQ-certified Quality Engineer. Mr. Bard is also the author of numerous professional and scientific papers and articles.

*Gerald D. Brennan, Jr., J.D.* joined Aastrom in July 2005 as its Vice President Administrative & Financial Operations and Chief Financial Officer. He comes to the Company from Great Lakes Chemical Corporation, where he served as Director New Ventures, and previously served as Chief Financial Officer of Great Lakes Fine Chemical Division and Monsanto Pharma Tech. Prior to that time, Mr. Brennan was Chief Financial Officer and Chief Operating Officer of Capcom Coin-Op, Inc., and he served in various management positions at Tupperware including Vice President of Distributor Operations and Administration for Tupperware North America, President of Tupperware Canada and General Counsel of Tupperware Worldwide. He has also served as Tax Counsel at Premark and as a Tax Manager at Coopers & Lybrand. Mr. Brennan holds a BSBA in Accounting and Business Economics, from Marquette University, and a JD from the University of Illinois. Mr. Brennan is a member of the Illinois Bar, and is a Certified Public Accountant in the State of Illinois.

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*James A. Cour* joined Aastrom in July 2004 as its President and Chief Operating Officer. Prior to joining Aastrom Mr. Cour held executive level management positions with several companies, including Baxter International, Windsor VanGelder Limited and Cytomedix. Mr. Cour brings to Aastrom over twenty years of business experience in operations and business development to strategic planning and international business. His broad range of experiences includes the management of major multinational healthcare operations, as well as a biotech/medical device company. Mr. Cour is experienced in the areas of medical products, biologic pharmaceuticals, business development, strategic alliances, analysis of new technologies and licensing. Mr. Cour received a Bachelor of Business Administration, with honors, from the University of Notre Dame, and an MBA from the University of Chicago, with concentrations in Marketing and International Business, with a specialization in Finance. He was also licensed as a Certified Public Accountant.

*Brian S. Hampson* joined the Company in July 1993 as Director, Product Engineering and became Vice President Product Development in June 2000. He has been a principal leader in the development and engineering of the AastromReplicell Cell Production System. Previously, Mr. Hampson served as Manager, In Vitro Systems at Charles River Laboratories and held other positions after joining that company in January 1986. While at Charles River, he managed a number of programs to develop and commercialize novel bioreactor systems to support large-scale cell culture and biomolecule production. Prior to that, Mr. Hampson held several engineering positions at Corning Incorporated from September 1979 to January 1986, including assignments with KC Biological, a wholly owned subsidiary of Corning at the time. Mr. Hampson received his Bachelor of Science and Master of Engineering degrees in Electrical Engineering from Cornell University.

*Janet M. Hock, B.D.S., Ph.D.*, joined Aastrom in September 2004 as its Vice President Global Research, and also became Chief Scientific Officer in May 2005. She was previously on the faculty of Indiana University Schools of Medicine and Dentistry (IU), where she was Professor, Department of Anatomy and Cell Biology, School of Medicine, and Professor, Department of Periodontics, School of Dentistry. Dr. Hock was also program director and founder of the Indiana University Cancer Center Bone Cancers Research program, and founder of Thetis Consulting LLC, a scientific advisory firm focused on the treatment of skeletal diseases and bone cancer. Prior to her tenure at IU, she was employed by Eli Lilly and Company (Lilly) to lead the discovery and development of anabolic drugs for the treatment of osteoporosis. She served in various senior technology development positions including: Senior Research Advisor for Product Development, Head of the Bone Formation Group, Director of the Skeletal Diseases Research Group, and Product Team Research Advisor/ Chief Scientific Officer. Dr. Hock's responsibilities included product development, preclinical pharmacology, drug discovery and development, regulatory, patent strategy, and formation of research alliances. During her leadership at Lilly, Dr. Hock contributed to the successful clinical development of two important new drug treatments for osteoporosis: Evista® and Forteo®. Dr. Hock holds a B.D.S. Degree in Dental Surgery (D.D.S. equivalent) from the University of London, Guy's Hospital Dental School, UK, an L.D.S., R.C.S. Licentiate in Dental Surgery, Royal College of Surgeons, UK, and a Ph.D. from the University of London, UK, for thesis work done at the University of Iowa and California Institute of Technology. In addition, Dr. Hock holds an M.S. for Oral Diagnosis and a Clinical Certificate in Periodontology from the University of Iowa. In addition to her academic and industry roles, since 1977, Dr. Hock has served the National Institutes of Health, the U.S. Department of Veterans' Affairs, the U.S. Department of Defense and the U.S.D.A. in a variety of capacities, including peer grant reviewer and committee chair. She serves on the Scientific Advisory Board for the Indiana University/ Purdue University at Indianapolis (IUPUI) Center for Regenerative Medicine and Biology, and the University of Michigan Center for Oral Health Research. Dr. Hock also serves on the editorial boards for several research journals.

### **Available Information**

Additional information about Aastrom is contained at our website, [www.aastrom.com](http://www.aastrom.com). Information on our website is not incorporated by reference into this report.

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### **Item 2. *Properties***

We lease approximately 23,700 square feet of office and research and development space in Ann Arbor, Michigan under a lease agreement. We are currently negotiating an extension to our current lease. We believe that our facilities are adequate for our current needs. Additional facilities may be required to support expansion for research and development abilities or to assume manufacturing operations that are currently fulfilled through contract manufacturing relationships. We also lease office space in Berlin, Germany for our German subsidiary, Aastrom Biosciences GmbH.

### **Item 3. *Legal Proceedings***

We are not currently party to any material legal proceedings, although from time to time we may become involved in disputes in connection with the operation of our business.

### **Item 4. *Submission Of Matters To A Vote Of Security Holders***

None

## PART II

**Item 5. Market for Registrant's Common Equity and Related Shareholder Matters**

Beginning on February 4, 1997 our common stock was quoted on the Nasdaq National Market under the symbol "ASTM". Since June 11, 2002, our common stock has been quoted on the Nasdaq SmallCap Market under the symbol "ASTM". The following table sets forth the high and low closing prices per share of common stock as reported on the Nasdaq SmallCap Market:

**Price Range of Common Stock**

	<u>High</u>	<u>Low</u>
Year ended June 30, 2004:		
1st Quarter	\$ 1.83	\$ .79
2nd Quarter	1.66	1.25
3rd Quarter	1.76	1.27
4th Quarter	1.36	.80
Year ended June 30, 2005:		
1st Quarter	.97	.63
2nd Quarter	1.66	.84
3rd Quarter	4.05	1.37
4th Quarter	3.13	1.90

As of August 31, 2005, there were approximately 591 holders of record of the common stock. We have never paid any cash dividends on our common stock and we do not anticipate paying such cash dividends in the foreseeable future. We currently anticipate that we will retain all future earnings, if any, for use in the development of our business.

The following table sets forth information as of June 30, 2005 with respect to compensation plans (including individual compensation arrangements) under which equity securities are authorized for issuances:

	<u>Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights</u>	<u>Weighted Average Exercise Price of Outstanding Options, Warrants and Rights</u>	<u>Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans</u>
Equity compensation plans approved by security holders (employees and directors)	4,085,953	\$ 1.55	4,056,962
Equity compensation plans not approved by security holders (financings or services related)	495,868	\$ 1.74	—
Balance, June 30, 2005	<u>4,581,821</u>	\$ 1.57	<u>4,056,962(1)</u>

(1) Includes shares issuable under the 2004 Omnibus Equity Incentive Plan.

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**Item 6. Selected Financial Data**

The statement of operations data for the years ended June 30, 2003, 2004 and 2005 and for the period from March 24, 1989 (Inception) to June 30, 2005 and the balance sheet data at June 30, 2004 and 2005, are derived from, and are qualified by reference to, the audited consolidated financial statements included in this 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 years ended June 30, 2001 and 2002, and the balance sheet data at June 30, 2001, 2002 and 2003, are derived from audited consolidated financial statements not included herein. The data set forth below are qualified by reference to, and should be read in conjunction with, the consolidated financial statements and notes thereto and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Year Ended June 30,					March 24, 1989 (Inception) to June 30, 2005
	2001	2002	2003	2004	2005	
<b>Statement of Operations Data:</b>						
<b>Revenues:</b>						
Product sales and rentals	\$ 85,000	\$ 80,000	\$ 314,000	\$ 49,000	\$ 387,000	\$ 1,118,000
Research and development agreements	—	—	10,000	75,000	—	2,105,000
Grants	814,000	797,000	520,000	1,178,000	522,000	8,048,000
Total revenues	899,000	877,000	844,000	1,302,000	909,000	11,271,000
<b>Costs and expenses:</b>						
Cost of product sales and rentals(1)	13,000	202,000	893,000	280,000	148,000	2,793,000
Research and development	4,983,000	5,428,000	5,647,000	6,289,000	7,206,000	100,643,000
Selling, general and administrative	2,482,000	3,528,000	4,017,000	5,390,000	5,972,000	39,489,000
Total costs and expenses	7,478,000	9,158,000	10,557,000	11,959,000	13,326,000	142,925,000
Loss from operations	(6,579,000)	(8,281,000)	(9,713,000)	(10,657,000)	(12,417,000)	(131,654,000)
<b>Other income (expense):</b>						
Other income	—	—	—	—	12,000	1,249,000
Interest income	653,000	342,000	134,000	169,000	594,000	5,965,000
Interest expense	—	—	—	—	—	(267,000)
Net loss	\$ (5,926,000)	\$ (7,939,000)	\$ (9,579,000)	\$ (10,488,000)	\$ (11,811,000)	\$ (124,707,000)
Net loss applicable to common shares	\$ (5,926,000)	\$ (7,939,000)	\$ (9,579,000)	\$ (10,488,000)	\$ (11,811,000)	
Net loss per common share (basic and diluted)	\$ (.17)	\$ (.19)	\$ (.19)	\$ (.14)	\$ (.13)	
Weighted average number of common shares outstanding (basic and diluted)	34,030,000	42,121,000	50,984,000	73,703,000	93,541,000	

	June 30,				
	2001	2002	2003	2004	2005
<b>Balance Sheet Data:</b>					
Cash, cash equivalents and short-term investments	\$ 10,659,000	\$ 9,605,000	\$ 10,512,000	\$ 16,926,000	\$ 32,414,000
Working capital	10,715,000	10,597,000	11,273,000	17,274,000	32,275,000
Total assets	11,905,000	11,553,000	12,155,000	18,166,000	33,897,000
Deficit accumulated during the development stage	(85,858,000)	(93,797,000)	(103,376,000)	(113,864,000)	(125,675,000)
Total shareholders' equity	10,894,000	10,803,000	11,575,000	17,608,000	33,028,000

(1) Cost of product sales and rentals for the years ended June 30, 2002, June 30, 2003, June 30, 2004 and June 30, 2005 includes a charge of \$202,000, \$748,000, \$253,000 and \$9,000 for excess inventories, respectively.

**Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

**Overview**

We are a development stage company focused on the development of the *ex vivo* production and sale of proprietary human cell products for use in cell therapy and tissue regeneration. Our pre-clinical and clinical product development programs utilize bone marrow-derived adult stem and progenitor cell mixtures being investigated for aiding in the growth of tissues such as bone, vascular tissue and cartilage, as well as blood and immune system cells. We currently operate our business in one reportable segment — research and product development, conducted both on our own behalf and in connection with various collaborative research and development agreements with others, involving the development of proprietary cell-based therapeutics.

In the expanding fields of cell therapy and tissue regeneration, we are developing proprietary adult bone marrow cell-based products, some of which are now in the clinical stage, for the regenerative repair of damaged human tissues and other medical disorders. Our lead products contain TRCs, which are a unique mixture of bone marrow-derived adult stem and progenitor cells, produced outside of the body or "*ex vivo*" from a small amount of bone marrow taken from the patient. In clinical trials involving over 180 patients, our TRCs have been demonstrated to be safe and reliable, and appeared to regenerate certain normal healthy human tissues.

We have also developed our proprietary AastromReplicell System, which is a patented, integrated system of instrumentation and single-use consumable kits for the commercial production of human cells. The AastromReplicell System was developed to provide a manufacturing platform for our proprietary cell products, such as our TRCs. The AastromReplicell System technology has also been applied to the production of dendritic cells and dendritic cell vaccines for third parties requiring automated cell production supporting GMP (Good Manufacturing Practice) compliance. Since this third-party development activity is minimal at present, active development and marketing activities targeting developers of dendritic cells and dendritic cell vaccines have been halted.

Our commercial production pathway for our TRC cell products is in part enabled through the AastromReplicell System platform. This proprietary and automated clinical cell production system combines patented GMP-compliant automated cell production with patented "single-pass perfusion." Single-pass perfusion is our technology for growing large quantities of highly robust human cells outside the body. These cells include adult stem and progenitor cell mixtures, which are the cells believed to be required for forming tissues such as bone, vascular, cartilage, blood, and immune system cells.

Our primary business model is to establish a core infrastructure for the manufacturing and distribution of TRC cell products for use in multiple medical indications. Initially, we intend to pursue TRC based cell products for the following therapeutic areas:

- Local bone regeneration such as is needed in fractures, spinal fusion, and jaw bone reconstruction
- Vascular (blood vessel) regeneration in limb ischemia resulting from diabetes and other diseases

In the future, we may develop and/or support the development by third parties of products for other areas such as cartilage regeneration, cardiac tissue regeneration, and dendritic cell based vaccines.

We do not have the sales or marketing organization that would be needed to commercialize our therapeutic products. We intend to seek partnerships with other companies who have this capability, as well as to develop our own ability to either support these relationships and, if necessary, to complete some pilot level of sales and marketing activity ourselves.

In the EU, our business development activities are aided through our small, wholly-owned subsidiaries located in Dublin, Ireland and Berlin, Germany.

Since our inception, we have been in the development stage and engaged in research and product development, conducted principally on our own behalf, but also in connection with various collaborative research and development agreements with others. Our initial business plan was to pursue the bone marrow transplantation markets. At approximately the same time (late fiscal year 1999) that we intended to

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commence our initial pilot-scale product launch in the EU of the AastromReplicell System with the SC-I kit, data was released at international meetings that resulted in the majority of the patients who would otherwise have been candidates for the SC-I product, to no longer require the use of the product. This loss of market for the SC-I caused us to reorganize our operations and suspend all external activities in October 1999, pending the receipt of additional financing and the completion of the reorganization process. We expanded the capabilities of the AastromReplicell System to include dendritic cell production and initiated pilot marketing activities for the CE Marked DC-I, DCV-I and the DCV-II products. However, only minimal and irregular revenue has been generated from these products, and as a result it is no longer a priority area for us. Therefore, we plan to limit our marketing efforts promoting the AastromReplicell System as a stand-alone product. Rather our focus is on utilizing the AastromReplicell System technology in cell manufacturing facilities to support our TRC development programs. At such time as we satisfy applicable regulatory approval requirements, we expect the sales of our TRC and our related cell-based products will constitute nearly all of our product sales revenues.

We do not expect to generate positive cash flows from our consolidated operations for at least the next several years and then only if more significant TRC cell product sales commence. Until that time, we expect that our revenue sources will consist of only minor sales from our dendritic cell kits to academic and commercial research centers, grant revenue and research funding, and potential licensing fees, or other financial support from potential future corporate collaborators.

To date, we have financed our operations primarily through public and private sales of our equity securities, and we expect to continue obtaining required capital in a similar manner. As a development-stage company, we have never been profitable and do not anticipate having net income unless and until significant product sales commence. This is not likely to occur until we obtain significant additional funding and complete the required clinical trials for regulatory approvals, and receive the necessary approvals to market our products. Through, June 30, 2005, we have accumulated losses of approximately \$125 million. We cannot provide any assurance that we will be able to achieve profitability on a sustained basis, if at all, obtain the required funding, obtain the required regulatory approvals, or complete additional corporate partnering or acquisition transactions.

### **Critical Accounting Policies**

There are several accounting policies that we believe are significant to the presentation of our consolidated financial statements. Note 1 to our consolidated financial statements "Overview and Summary of Significant Accounting Policies" summarizes each of our significant accounting policies. The most significant accounting policies include those related to revenue recognition, accounts receivable and inventories.

*Revenue recognition* — We generate revenue from grants and research agreements, collaborative agreements, product sales and rentals and licensing arrangements. Revenue from grants and research agreements is recognized on a cost reimbursement basis consistent with the performance requirements of the related agreements. Revenue from collaborative agreements is recognized when the scientific or clinical results stipulated in the agreement have been met and there are no other ongoing obligations on our part. We recognize revenue from product sales when title to the product transfers and there are no remaining obligations that will affect the customer's final acceptance of the sale. If there are remaining obligations, including training and installation (which we believe to be significant), we do not recognize revenue until completion of these obligations. We recognize revenue from licensing fees under licensing agreements and rental revenue when there are no future performance obligations remaining with respect to such fees. Payments received before all obligations are fulfilled are classified as deferred revenue.

Revenues include rental revenue of \$37,000, \$37,000, \$0 and \$93,000, from the years ended June 30, 2003, 2004, 2005 and for the period from Inception to June 30, 2005, respectively. This revenue was generated from AastromReplicell System rental agreements that have since expired or have been terminated. Based upon our current business strategy we do not expect to generate rental revenues in future periods.

*Accounts receivable* — We make estimates evaluating collectibility of accounts receivable. We continuously monitor collections and payments from our customers and maintain an allowance for estimated credit

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losses based on any specific customer collection issues we have identified. While such credit issues have not been significant, there can be no assurance that we will continue to experience the same level of credit losses in the future. As of June 30, 2005, our allowance for doubtful accounts was \$16,000.

*Inventories* — We value our inventories that consist primarily of the AastromReplicell System and our disposable cell production cassettes and base medium, at the lower of cost (specific identification using the first in, first out method) or market. We regularly review inventory quantities on hand and record a provision to write down excess inventories to their estimated net realizable value.

- *AastromReplicell System (ARS) Inventories* — Based upon market conditions and our historical experience with the ARS product line, the carrying value of our aggregate ARS inventories is reduced if such inventories are held in excess of twelve months without sale because the probability-weighted selling price of the aggregate inventories declines after inventory has been on-hand for more than twelve months. We continue to reduce the aggregate carrying value of ARS inventories over the ensuing six months if the inventories are not sold. The carrying value of ARS inventories under evaluation at potential customer sites are not reduced so long as the estimated selling price (less selling costs) exceeds the carrying value of the inventories under evaluation. Pursuant to this accounting policy we recorded provisions to reduce the carrying value of the ARS inventories by \$253,000 and \$9,000 in fiscal years ending June 30, 2004 and 2005, respectively. Additionally, in fiscal year 2005, we recorded a charge of \$90,000 to research and development expense for excess ARS inventories that were re-deployed for clinical use. As of June 30, 2005, the carrying value of our ARS inventories was reduced to zero. Based upon our current business strategy, we do not expect to generate revenues from the sale of ARS inventories in future periods.
- *Cell Cassette and Base Medium Inventories* — We maintain cell cassette and base medium inventories for sale to existing customers and clinical sites. We evaluate the net realizable value of these inventories considering expected future sales quantities, prices and timing, and considering the limited shelf life of these inventories.

The summary of significant accounting policies should be read in conjunction with our consolidated financial statements and related notes and this discussion of our results of operations.

## **Results of Operations**

Total revenues were \$909,000 in 2005, \$1,302,000 in 2004, and \$844,000 in 2003. Product sales and rentals revenues increased to \$387,000 in 2005 from \$49,000 in 2004 and \$314,000 in 2003. This increase is primarily the result of increased volume of therapy kit sales for clinical trials and research by others, and revenue of \$120,000 from the sale of an AastromReplicell System in 2005. Revenues include rental revenue of \$37,000, \$37,000, \$0 and \$93,000, from the years ended June 30, 2003, 2004, 2005 and for the period from Inception to June 30, 2005, respectively. This revenue was generated from AastromReplicell System rental agreements that have since expired or have been terminated. Based upon our current business strategy we do not expect to generate rental revenues in future periods. We plan to limit our marketing efforts promoting the AastromReplicell System as a stand-alone product. Rather our focus is on utilizing the AastromReplicell System technology in cell manufacturing facilities to support our TRC development programs. At such time as we satisfy applicable regulatory approval requirements, we expect the sales of our TRC and our related cell-based products will constitute nearly all of our product sales revenues.

Revenues for 2004 also include \$75,000 in research and development agreements compared to \$10,000 for 2003. This increase is the result of a \$50,000 fee from our sublicense agreement with Corning Inc. compared to a \$10,000 fee for 2003, and an additional fee of \$25,000 in 2004 from a development agreement with a European institution. No revenue was generated from research and development agreements in 2005.

Grant revenues decreased to \$522,000 in 2005 from \$1,178,000 in 2004 and increased slightly from \$520,000 in 2003. Grant revenues in 2005 decreased from 2004 as a result of decreased activity on the collaborative grant with the Defense Advanced Research Projects Agency (DARPA) and reduced activity on grants from the National Institutes of Health. Grant revenues accounted for 57% of total revenues for 2005,

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90% for 2004 and 62% for 2003 and are recorded on a cost-reimbursement basis. Grant revenues may vary in any period based on timing of grant awards, grant-funded activities, level of grant funding and number of grants awarded.

Total costs and expenses were \$13,326,000 in 2005, \$11,959,000 in 2004 and \$10,557,000 in 2003. Costs and expenses include an increase in research and development expenses to \$7,206,000 in 2005 from \$6,289,000 in 2004 and \$5,647,000 in 2003. These increases reflect expanded research activities to support regulatory submissions and anticipated product registrations, product development activities in the area of tissue regeneration, development of product distribution processes, and ongoing and planned bone grafting trials in the U.S. and the EU. Research and development expenses in 2005, also include a non-cash charge of \$101,000 relating to stock options awarded to an employee whose status changed to a consultant.

Selling, general and administrative expenses increased in 2005 to \$5,972,000 from \$5,390,000 in 2004 and \$4,017,000 in 2003. The increase from 2004 to 2005 is due to additional consulting, pre-marketing activities and costs required for financial internal controls compliance and certification that totaled approximately \$375,000. Salary and related employee benefits also increased in 2005 by approximately \$250,000 as a result of hiring an additional executive. Additionally, in 2005 there was a non-cash charge of \$59,000 related to a variable stock option that was exercised. These increases were partially offset by decreased legal expenses. The increase in selling, general and administrative costs from 2003 to 2004 is due to increased marketing activities in the EU to further our commercialization efforts and additional capital raising costs not related to specific transactions. Selling, general and administrative costs in 2004 also includes a non-cash charge of \$53,000 relating to certain warrants issued for public and investor relations services and a \$372,000 non-cash charge related to an employee performance-based stock option that vested.

Cost of product sales and rentals were \$139,000 in 2005, \$27,000 in 2004 and \$145,000 in 2003. The fluctuation in cost of product sales and rentals is due to the changes in the volume of product sales. The non-cash provision for excess AastromReplicell System inventories was \$9,000 in 2005, \$253,000 in 2004 and \$748,000 in 2003. As of June 30, 2005, the carrying value of our AastromReplicell System inventories was reduced to zero. Based upon our current business strategy, we do not expect to generate revenues from the sale of AastromReplicell System inventories in future periods.

With the adoption of SFAS 123R effective July 1, 2005, which requires companies to measure the value of all employee stock-based payments at the time of award and recognize that value as an operating expense over the service period, we expect an increase in our operating expenses beginning in the first quarter of the current fiscal year.

Interest income was \$594,000 in 2005, \$169,000 in 2004 and \$134,000 in 2003. The fluctuations in interest income are due primarily to corresponding changes in the levels of cash, cash equivalents and short-term investments during the periods and improving yields from our investments.

Our net loss was \$11,811,000, or \$.13 per common share in 2005, \$10,488,000, or \$.14 per common share in 2004, and \$9,579,000, or \$.19 per common share in 2003. These increases in net loss are primarily the result of increased costs and expenses as the result of expanded activities that for the purposes of computing per share amounts were offset by an increase in the weighted average number of common shares outstanding resulting from additional equity financings described in the "Liquidity and Capital Resources" discussion below. We expect to report additional significant net losses until such time as substantial TRC cell product sales commence.

Our major ongoing research and development project is focused on the development of bone marrow-derived adult stem and progenitor cells — TRCs — for use in orthopedic indications (bone grafting, spine fusion, and jaw bone reconstruction) and for use in vascular system regeneration. Clinical trials using TRCs are underway in both the U.S. and the EU to evaluate bone formation in patients with long bone fractures, and clinical trials are underway in the EU to evaluate bone formation in the jaw (maxilla) bone. An EU clinical trial for the treatment of limb ischemia resulting from peripheral vascular disease will begin later in calendar year 2005. We are developing clinical protocols to evaluate TRCs in the fusion of spine vertebrae through new bone growth in separate trials in the U.S. and the EU. All of these potential product applications use TRCs

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created by our proprietary process and device technologies. We are also completing other research and development activities using our TRCs that are intended to improve the functionality for certain clinical indications, to improve shelf life, and to decrease the cost of manufacturing our TRC products. We are also exploring the capability of TRCs to generate various types of human tissues, such as bone, vascular, cartilage and cardiac tissues. Research and development expenses outside of the TRC program consist primarily of immunotherapy programs, engineering and cell manufacturing.

The following table summarizes our research and development expenses for each of the fiscal years in the three year period ended June 30, 2005:

R&D Project	Year Ended June 30,		
	2003	2004	2005
TRCs	\$ 2,721,000	\$ 4,133,000	\$ 5,916,000
Other	2,926,000	2,156,000	1,290,000
Total	\$ 5,647,000	\$ 6,289,000	\$ 7,206,000

Because of the uncertainties of clinical trials and the evolving regulatory requirements applicable to TRCs, estimating the completion dates or cost to complete our major research and development program would be highly speculative and subjective. The risks and uncertainties associated with developing our products, including significant and changing governmental regulation and the uncertainty of future clinical study results, are discussed in greater detail in the “Any changes in the governmental regulatory classifications of our products could prevent, limit or delay our ability to market and develop our products,” “Our inability to complete our product development activities successfully would severely limit our ability to operate or finance operations,” and “We must successfully complete our clinical trials to be able to market certain of our products,” sections under the heading “Business Risks” following Item 7A of this report. The lengthy process of seeking regulatory approvals for our product candidates, and the subsequent compliance with applicable regulations, will require the expenditure of substantial resources. Any failure by us to obtain, or any delay in obtaining, regulatory approvals could cause our research and development expenditures to increase and, in turn, have a material adverse effect on our results of operations. We cannot be certain when any net cash inflow from products validated under our major research and development project, if any, will commence.

We have not generated any net taxable income since our inception and therefore have not paid any federal income taxes since inception. We issued shares of common stock in prior years, which resulted in multiple ownership changes under relevant taxation rules (Section 382 of the Internal Revenue Code). Consequently, pursuant to these taxation rules, the utilization of net operating loss and tax credit carryforwards will be significantly limited in future periods, even if we generate taxable income. Such limitations may result in our carryforwards expiring before we can utilize them. At June 30, 2005, we have generated cumulative Federal tax net operating loss and tax credit carryforwards of, \$57,200,000 and \$700,000, respectively, which will expire in various periods between 2006 and 2026, if not utilized. Our ability to utilize our net operating loss and tax credit carryforwards may become subject to further annual limitation in the event of future changes in ownership under the taxation rules.

### Liquidity and Capital Resources

We have financed our operations since inception primarily through public and private sales of our equity securities, which, from inception through June 30, 2005, have totaled approximately \$159 million 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 generally allowed us to maintain adequate levels of cash and other liquid investments.

Our combined cash, cash equivalents and short-term investments totaled \$32,414,000 at June 30, 2005, an increase of \$15,488,000 from June 30, 2004. During the year ended June 30, 2005, the primary source of cash, cash equivalents and short-term investments was from equity transactions, with net proceeds of \$27,071,000. This equity financing was obtained under multiple transactions in which we sold our common

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shares and warrants to purchase common shares to investors and common shares sold through our Employee Stock Purchase Plan, stock option plans and Direct Stock Purchase Plan. We also concluded a sale of our common stock with Fusion Capital Fund II, LLC, pursuant to the common stock purchase agreement dated October 30, 2002. The primary uses of cash, cash equivalents and short-term investments during the year ended June 30, 2005 included \$11,065,000 to finance our operations and working capital requirements, and \$586,000 in capital equipment additions. Included in our capital equipment purchases is \$111,000 of equipment that we intend to use in the future in a specialized facility under our control for the production of human cells.

Our combined cash, cash equivalents and short-term investments totaled \$16,926,000 at June 30, 2004, an increase of \$6,414,000 from June 30, 2003. During the year ended June 30, 2004, we raised net proceeds of \$16,096,000 through the sale of our equity securities. The primary uses of cash, cash equivalents and short-term investments during the year ended June 30, 2004 included \$9,525,000 to finance our operations and working capital requirements, and \$157,000 in capital equipment additions.

We expect that our total capital expenditures for the fiscal year ended June 30, 2006 to be approximately \$1,046,000. The primary purpose of these expenditures will be for acquisition of cell manufacturing and laboratory equipment. We expect our monthly cash utilization to be approximately \$1.5 million per month on average during fiscal year 2006.

Our future cash requirements will depend on many factors, including continued scientific progress in our 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. We do not expect to generate a positive cash flow from operations for at least the next several years due to the expected spending for research and development programs and the cost of commercializing our product candidates. We intend to seek additional funding through research and development agreements or grants, distribution and marketing agreements and through public or private debt or equity financing transactions. Successful future operations are subject to several technical and business risks, including our continued ability to obtain future funding, satisfactory product development, obtaining regulatory approval and market acceptance for our products. We expect that our available cash and expected interest income will be sufficient to finance currently planned activities beyond the end of fiscal year 2006 (ending June 30, 2006). These estimates are based on certain assumptions which could be negatively impacted by the matters discussed under this heading and under the caption "Business Risks", included herein. In order to grow and expand our business, and to introduce our product candidates into the marketplace, we will need to raise additional funds. We will also need additional funds or a collaborative partner, or both, to finance the research and development activities of our product candidates for the expansion of additional cell types. We expect that our primary sources of capital for the foreseeable future will be through collaborative arrangements and through the public or private sale of our 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 our ability to raise additional funding, including, but not limited to, market volatility of our common stock, continued stock market listing and economic conditions affecting the public markets generally or some portion or the entire technology sector. If our common stock is delisted from The Nasdaq SmallCap Market, the liquidity of our common stock could be impaired, and prices for the shares of our common stock could be lower than might otherwise prevail.

If adequate funds are not available, we may be required to delay, reduce the scope of, or eliminate one or more of our research and development programs, which may have a material adverse affect on our business. See "Business Risks" and "Notes to Consolidated Financial Statements" included herein.

[Table of Contents](#)**Long-Term Contractual Obligations and Commitments**

The following table sets forth Aastrom's contractual obligations along with cash payments due each period.

Contractual Obligations	Total	Payments Due by Period			
		Less than 1 Year	1 — 3 Years	3 — 5 Years	More than 5 Years
Purchase order commitments	\$ 247,000	\$ 247,000	\$ —	\$ —	\$ —
Total	\$ 247,000	\$ 247,000	\$ —	\$ —	\$ —

**New Accounting Standards**

In November 2004, the Financial Accounting Standards Board (FASB) issued Statements of Financial Accounting Standards No. 151, "Inventory Costs" (SFAS 151), an amendment of Accounting Research Bulletin No. 43, "Inventory Pricing". SFAS 151 requires all companies to recognize a current-period charge for abnormal amounts of idle facility expense, freight, handling costs and wasted materials. The statement also requires that the allocation of fixed production overhead to the costs of conversion be based on the normal capacity of the production facilities. This new standard will be effective for us beginning in fiscal year 2006. We do not expect SFAS 151 to have a material impact on our results of operations or financial position.

In December 2004, the Financial Accounting Standards Board (FASB) issued Statements of Financial Accounting Standards No. 123R, "Share-Based Payment" (SFAS 123R), which requires companies to measure and recognize compensation expense for all employee stock-based payments at fair value and recognize expense over the service period underlying the arrangement. Pursuant to Securities and Exchange Commission (SEC) rules, SFAS 123R is effective for all annual periods beginning after June 15, 2005. We are required to adopt SFAS 123R effective July 1, 2005 and are currently evaluating the impact of SFAS 123R on our financial statements. We expect that SFAS 123R will result in an increase in operating expenses in future periods.

**Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

As of June 30, 2005, our cash and cash equivalents included money market securities and short-term investments included short-term corporate debt securities with original maturities of less than twelve months. Due to the short duration of our investment portfolio, an immediate 10% change in interest rates would not have a material effect on the fair market value of our portfolio, therefore, we would not expect our operating results or cash flows to be affected to any significant degree by the effect of a sudden change in market interest rates on our securities portfolio.

Our sales to customers in foreign countries are denominated in U.S. dollars. Our vendors, employees and clinical sites in countries outside the U.S. are typically paid in Euros. However, such expenditures have not been significant to date. Accordingly, we are not directly exposed to market risks from currency exchange rate fluctuations. We believe that the interest rate risk related to our accounts receivable is not significant. We manage the risk associated with these accounts through periodic reviews of the carrying value for non-collectibility and establishment of appropriate allowances in connection with our internal controls and policies. We do not enter into hedging transactions and do not purchase derivative instruments.

## BUSINESS RISKS

*Our business is subject to a number of uncertainties, including those discussed below.*

### **Our past losses and expected future losses cast doubt on our ability to operate profitably.**

We were incorporated in 1989 and have experienced substantial operating losses since inception. As of June 30, 2005, we have incurred cumulative net losses totaling approximately \$125 million. These losses have resulted principally from costs incurred in the research and development of our cell culture technologies and the AastromReplicell System, general and administrative expenses, and the prosecution of patent applications. We expect to incur significant operating losses at least until, and probably after, product sales increase, primarily owing to our research and development programs, including pre-clinical studies and clinical trials, and the establishment of marketing and distribution capabilities necessary to support commercialization efforts for our products. We cannot predict with any certainty the amount of future losses. Our ability to achieve profitability will depend, among other things, on successfully completing the development of our product candidates, obtaining regulatory approvals, establishing manufacturing, sales and marketing arrangements with third parties, maintaining supplies of key manufacturing components, and raising sufficient funds to finance our activities. We may not be able to achieve or sustain profitability.

### **Failure to obtain and maintain required regulatory approvals would severely limit our ability to sell our products.**

We must obtain the approval of the FDA before commercial sales of our cell product candidates may commence in the U.S., which we believe will ultimately be the largest market for our products. We will also be required to obtain additional approvals from various foreign regulatory authorities to initiate sales activities of cell products, and continue or increase sale of equipment, in those jurisdictions, such as the EU. If we cannot demonstrate the safety, reliability and efficacy of our cell product candidates, or of the cells produced in our device products, we may not be able to obtain required regulatory approvals. If we cannot demonstrate the safety or efficacy of our technologies and product candidates, including long-term sustained engraftment, or if one or more patients die or suffer severe complications, the FDA or other regulatory authorities could delay or withhold regulatory approval of our product candidates.

Finally, even if we obtain regulatory approval of a product, that approval may be subject to limitations on the indicated uses for which it may be marketed. Even after granting regulatory approval, the FDA and regulatory agencies in other countries continue to review and inspect marketed products, manufacturers and manufacturing facilities, which may create additional regulatory burdens. Later discovery of previously unknown problems with a product, manufacturer or facility, may result in restrictions on the product or manufacturer, including a withdrawal of the product from the market. Further, regulatory agencies may establish additional regulations that could prevent or delay regulatory approval of our products.

### **Any changes in the governmental regulatory classifications of our products could prevent, limit or delay our ability to market or develop our products.**

The FDA establishes regulatory requirements based on the classification of a product. Although the AastromReplicell System is currently considered to be unregulated manufacturing equipment in the U.S., the FDA may reconsider this and classify the System as a Class III medical device, or may ultimately choose to regulate the AastromReplicell System under another category. Because our product development programs are designed to satisfy the standards applicable to medical devices and biological licensure for our cellular products, any change in the regulatory classification or designation would affect our ability to obtain FDA approval of our products. The AastromReplicell System is used to produce different cell mixtures, and each of these cell mixtures (such as the Tissue Repair Cells) may, under current regulations be regulated as a biologic product, which requires a BLA.

The new EU Directives (laws) have become effective, and have influenced the requirements for manufacturing cell products and the conduct of clinical trials. These changes have delayed or in some cases temporarily halted clinical trials of cellular products in the EU. The recent changes to the European Union

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Medicinal Products Prime Directive shifted patient-derived cells to the medicinal products category, which will require license approvals in order to market and sell these products. These new laws may delay some of our current planned clinical trials with Tissue Repair Cells in the EU, and will require clinical trials with data submission and review by European regulatory bodies. There is uncertainty as to the level of trials and data needed and because of the recent nature of these regulations; there is no established precedent to understand the timeline or other requirements for licensure.

### **Our inability to complete our product development activities successfully would severely limit our ability to operate or finance operations.**

Commercialization in the U.S. and the EU of our cell product candidates will require completion of substantial clinical trials, and obtaining sufficient safety and efficacy results to support required registration approval and market acceptance of our cell product candidates. We may not be able to successfully complete development of our product candidates, or successfully market our technologies or product candidates. We, and any of our potential collaborators, may encounter problems and delays relating to research and development, regulatory approval and intellectual property rights of our technologies and product candidates. Our research and development programs may not be successful, and our cell culture technologies and product candidates may not facilitate the production of cells outside the human body with the expected result. Our technologies and cell product candidates may not prove to be safe and efficacious in clinical trials, and we may not obtain the requisite regulatory approvals for our technologies or product candidates and the cells produced in such products. If any of these events occur, we may not have adequate resources to continue operations for the period required to resolve the issue delaying commercialization and we may not be able to raise capital to finance our continued operation during the period required for resolution of that issue.

### **We must successfully complete our clinical trials to be able to market certain of our products.**

To be able to market therapeutic cell products in the U.S. and in the EU, we must demonstrate, through extensive preclinical studies and clinical trials, the safety and efficacy of our processes and product candidates, for application in the treatment of humans. If our clinical trials are not successful, our products may not be marketable.

Our ability to complete our clinical trials in a timely manner depends on many factors, including the rate of patient enrollment. Patient enrollment can vary with the size of the patient population, the proximity of suitable patients to clinical sites, perceptions of the utility of cell therapy for the treatment of certain diseases and the eligibility criteria for the study. We have experienced delays in patient accrual in our previous and current clinical trials. If we experience future delays in patient accrual, we could experience increased costs and delays associated with clinical trials, which would impair our product development programs and our ability to market our products. Furthermore, the FDA monitors the progress of clinical trials and it may suspend or terminate clinical trials at any time due to patient safety or other considerations.

Our research programs are currently developing and evaluating new variations of TRCs that are intended to improve the functionality for certain clinical indications, to improve shelf life, and to decrease the cost of manufacturing our TRC products. These production process changes may alter the functionality of our TRCs, and would require various levels of experimental and clinical testing and evaluation. Any such testing or clinical study may affect regulatory review process and lengthen the time before TRC products would be commercially available.

Even if successful clinical results are reported for a product from a completed clinical trial, this does not mean that the results will be sustained over time, or are sufficient for a marketable or regulatory approvable product.

### **Even if we obtain regulatory approvals to sell our products, lack of commercial acceptance could impair our business.**

We will be seeking to obtain regulatory approvals to market our TRC cell products for tissue repair and regeneration treatments. Even if we obtain all required regulatory approvals, we cannot be certain that our

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products and processes will be adopted at a level that would allow us to operate profitably. Our TRCs will face competition from existing, and/or potential other new treatments in the future which could limit revenue potential. It may be necessary to increase the yield and/or cell type purity for certain of our AastromReplicell System cell processes to gain commercial acceptance. Our technologies or product candidates may not be employed in all potential applications being investigated, and any reduction in applications would limit the market acceptance of our technologies and product candidates, and our potential revenues.

### **The market for our products will be heavily dependent on third party reimbursement policies.**

Our ability to successfully commercialize our product candidates will depend on the extent to which government healthcare programs, such as Medicare and Medicaid, as well as private health insurers, health maintenance organizations and other third party payors will pay for our products and related treatments. 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. Reimbursement in the U.S. or foreign countries may not be available or maintained for any of our product candidates. If we do not obtain approvals for adequate third party reimbursements, we may not be able to establish or maintain price levels sufficient to realize an appropriate return on our investment in product development. Any limits on reimbursement available from third party payors may reduce the demand for, or negatively affect the price of, our products. For example, in the past, published studies have suggested that stem cell transplantation for breast cancer, that constituted a significant portion of the overall stem cell therapy market, at the time, may have limited clinical benefit. The lack of reimbursement for these procedures by insurance payors would negatively affect the marketability of our products.

### **Use of animal-derived materials could harm our product development and commercialization efforts.**

Some of the compounds we use in, and are critical to, our TRC manufacturing processes involve the use of animal-derived products, including fetal bovine serum. However, animal-derived cells are not used as "feeder cells" in the growth of human TRCs. Suppliers or regulatory authorities may limit or restrict the availability of such compounds for clinical and commercial use. For example, the occurrence of so-called "mad cow disease" in the U.S. or in New Zealand may lead to a restricted supply of the serum currently required for the TRC manufacturing process. Any restrictions on these compounds would impose a potential competitive disadvantage for our products or prevent our ability to manufacture TRC cell products. Regulatory authorities in the EU are reviewing the safety issues related to the use of animal-derived materials, which we currently use in our production process. It is unknown at this time what actions, if any, the authorities may take as to animal derived materials specific to medicinal products distributed in the EU. Our inability to develop or obtain alternative compounds would harm our product development and commercialization efforts. There are certain limitations in the supply of certain animal-derived materials, which may lead to delays in our ability to complete clinical trials or eventually to meet the anticipated market demand for our cell products.

### **Given our limited internal manufacturing, sales, marketing and distribution capabilities, we need to develop increased internal capability or collaborative relationships to manufacture, sell, market and distribute our products.**

We have only limited internal manufacturing, sales, marketing and distribution capabilities. As market needs develop, we intend to establish and operate commercial-scale manufacturing facilities, which will need to comply with all applicable regulatory requirements. We expect to develop new configurations of the AastromReplicell System for these centralized facilities to enable process and cost efficiencies associated with large-scale manufacturing. Establishing these facilities will require significant capital and expertise. Any delay in establishing, or difficulties in operating, these facilities will limit our ability to meet the anticipated market demand for our cell products. We intend to get assistance to market our future cell products through collaborative relationships with companies with established sales, marketing and distribution capabilities. Our inability to develop and maintain those relationships would limit our ability to market, sell and distribute our

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products. Our inability to enter into successful, long-term relationships could require us to develop alternate arrangements at a time when we need sales, marketing or distribution capabilities to meet existing demand. We may market our TRCs through our own sales force. Our inability to develop and retain a qualified sales force could limit our ability to market, sell and distribute our cell products.

### **We may not be able to raise the required capital to conduct our operations and develop our products.**

We will require substantial capital resources in order to conduct our operations and develop our products and cell manufacturing facilities. We expect that our available cash and interest income, including that raised in the recent sale of common stock, described above, will be sufficient to finance currently planned activities beyond the end of fiscal year 2006 (ending June 30, 2006). However, in order to grow and expand our business, and to introduce our new product candidates into the marketplace, we will need to raise additional funds. We will also need additional funds or a collaborative partner, or both, to finance the research and development activities of our product candidates for the expansion of additional cell types. Accordingly, we are continuing to pursue additional sources of financing.

Our future capital requirements will depend upon many factors, including:

- continued scientific progress in our research, clinical and development programs;
- costs and timing of conducting clinical trials and seeking regulatory approvals;
- competing technological and market developments;
- our ability to establish additional collaborative relationships; and
- the effect of commercialization activities and facility expansions if and as required.

Because of our long-term funding requirements, we intend to access the public or private equity markets if conditions are favorable to complete a financing, even if we do not have an immediate need for additional capital at that time, or whenever we require additional operating capital. This additional funding may not be available to us on reasonable terms, or at all. If adequate funds are not available in the future, we may be required to further delay or terminate research and development programs, curtail capital expenditures, and reduce business development and other operating activities.

### **The issuance of additional common stock for funding has the potential for substantial dilution.**

As noted above, we will need additional equity funding to provide us with the capital to reach our objectives. At such time, we may enter into financing transactions at prices, which are at a substantial discount to market. Such an equity issuance would cause a substantially larger number of shares to be outstanding and would dilute the ownership interest of existing stockholders.

### **Our stock price has been volatile and future sales of substantial numbers of our shares could have an adverse affect on the market price of our shares.**

The market price of shares of our common stock has been volatile, ranging in closing price between \$0.63 and \$4.05 during the twelve month period ended June 30, 2005. The price of our common stock may continue to fluctuate in response to a number of events and factors, such as:

- clinical trial results
- the amount of our cash resources and our ability to obtain additional funding
- announcements of research activities, business developments, technological innovations or new products by us or our competitors
- entering into or terminating strategic relationships
- changes in government regulation
- disputes concerning patents or proprietary rights

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- changes in our revenues or expense levels
- public concern regarding the safety, efficacy or other aspects of the products or methodologies we are developing
- news or reports from other stem cell, cell therapy or tissue engineering companies
- reports by securities analysts
- status of the investment markets

Any of these events may cause the price of our shares to fall, which may adversely affect our business and financing opportunities. In addition, the stock market in general and the market prices for biotechnology companies in particular have experienced significant volatility that often has been unrelated to the operating performance or financial conditions of such companies. These broad market and industry fluctuations may adversely affect the trading price of our stock, regardless of our operating performance or prospects.

### **Our stock may be delisted from Nasdaq, which could affect its market price and liquidity.**

We are required to meet certain qualitative and financial tests (including a minimum bid price for our common stock of \$1.00) to maintain the listing of our common stock on the Nasdaq Stock Market. In May 2003, and July 2004, we received notification from Nasdaq of potential delisting as a result of our stock trading below \$1.00 for more than thirty consecutive business days. While in each case our stock price recovered within the permitted grace periods and Nasdaq notified us that we were again in full compliance, we cannot provide any assurance that our stock price would again recover within the specified times if future closing bid prices below \$1.00 triggered another potential delisting. The qualitative tests we must meet address various corporate governance matters, including Audit Committee and Board composition. We have experienced recent director resignations and are devoting increased resources to Board member recruitment and retention. If we do not maintain compliance with the Nasdaq requirements within specified periods and subject to permitted extensions, our common stock may be recommended for delisting (subject to any appeal we would file). If our common stock were delisted, it could be more difficult to buy or sell our common stock and to obtain accurate quotations, and the price of our stock could suffer a material decline. Delisting would also impair our ability to raise capital.

### **Failure of third parties to manufacture component parts or provide limited source supplies, or imposition of additional regulation, would impair our new product development and our sales activities.**

We rely solely on third parties such as Astro, Moll, Cambrex and Amgen to manufacture or supply certain of our device product candidates, as well as component parts, growth factors and other materials used in the cell product manufacturing process. We would not be able to obtain alternate sources of supply for many of these items on a short-term basis. If any of our key manufacturers or suppliers fail to perform their respective obligations or if our supply of growth factors, components or other materials is limited or interrupted, we would not be able to conduct clinical trials or market our product candidates on a timely and cost-competitive basis, if at all.

Finally, we may not be able to continue our present arrangements with our suppliers, supplement existing relationships, establish new relationships or be able to identify and obtain the ancillary materials that are necessary to develop our product candidates in the future. Our dependence upon third parties for the supply and manufacture of these items could adversely affect our ability to develop and deliver commercially feasible products on a timely and competitive basis.

### **If we do not keep pace with our competitors and with technological and market changes, our products may become obsolete and our business may suffer.**

The markets for our products are very competitive, subject to rapid technological changes, and vary for different candidates and processes that directly compete with our products. Our competitors may have developed, or could in the future develop, new technologies that compete with our products or even render our

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products obsolete. As an example, in the past, published studies have suggested that hematopoietic stem cell therapy use for bone marrow transplantation, following marrow ablation due to chemotherapy, may have limited clinical benefit in the treatment of breast cancer, which was a significant portion of the overall hematopoietic stem cell transplant market. This resulted in the practical elimination of this market for our cell-based product for this application.

Our products are designed to improve and automate the processes for producing cells used in therapeutic procedures. Even if we are able to demonstrate improved or equivalent results, the cost or process of treatment and other factors may cause researchers and practitioners to not use our products and we could suffer a competitive disadvantage. As a result, we may be unable to recover the net book value of our inventories. Finally, to the extent that others develop new technologies that address the targeted application for our products, our business will suffer.

### **If we cannot attract and retain key personnel, then our business will suffer.**

Our success depends in large part upon our ability to attract and retain highly qualified scientific and management personnel. We face competition for such personnel from other companies, research and academic institutions and other entities. Further, in an effort to conserve financial resources, we have implemented reductions in our work force on two separate occasions. As a result of these and other factors, we may not be successful in hiring or retaining key personnel. The Company has a key man life insurance policy for R. Douglas Armstrong, Chief Executive Officer and Chairman of Aastrom. Our inability to replace any lost key employee could harm our operations.

### **If our patents and proprietary rights do not provide substantial protection, then our business and competitive position will suffer.**

Our success depends in large part on our ability to develop or license and protect proprietary products and technologies. However, patents may not be granted on any of our pending or future patent applications. Also, the scope of any of our issued patents may not be sufficiently broad to offer meaningful protection. In addition, our issued patents or patents licensed to us could be successfully challenged, invalidated or circumvented so that our patent rights would not create an effective competitive barrier. Furthermore, we rely on exclusive, world-wide licenses relating to the production of human cells granted to us by the University of Michigan for certain of our patent rights. If we materially breach such agreements or otherwise fail to materially comply with such agreements, or if such agreements expire or are otherwise terminated by us, we may lose our rights under the patents held by the University of Michigan. At the latest, these licenses will terminate when the patent underlying the license expires. The first of these underlying patents will expire on March 21, 2012. We also rely on trade secrets and unpatentable know-how that we seek to protect, in part, by confidentiality agreements with our employees, consultants, suppliers and licensees. These agreements may be breached, and we might not have adequate remedies for any breach. If this were to occur, our business and competitive position would suffer.

### **Intellectual property litigation could harm our business.**

Our success will also depend in part on our ability to develop commercially viable products without infringing the proprietary rights of others. Although we have not been subject to any filed infringement claims, other patents could exist or could be filed which would prohibit or limit our ability to market our products or maintain our competitive position. In the event of an intellectual property dispute, we may be forced to litigate. Intellectual property litigation would divert management's attention from developing our products and would force us to incur substantial costs regardless of whether we are successful. An adverse outcome could subject us to significant liabilities to third parties, and force us to curtail or cease the development and sale of our products and processes.

**The government maintains certain rights in technology that we develop using government grant money and we may lose the revenues from such technology if we do not commercialize and utilize the technology pursuant to established government guidelines.**

Certain of our and our licensors' research have been or are being funded in part by government grants. As a result of such funding, the U.S. Government has established guidelines and have certain rights in the technology developed with the grant. If we fail to meet these guidelines, we would lose our exclusive rights to these products, and we would lose potential revenue derived from the sale of these products.

**Potential product liability claims could affect our earnings and financial condition.**

We face an inherent business risk of exposure to product liability claims in the event that the use of the AastromReplicell System during research and development efforts, including clinical trials, or after commercialization, results in adverse affects. As a result, we may incur significant product liability exposure, which could exceed existing insurance coverage. We may not be able to maintain adequate levels of insurance at reasonable cost and/or reasonable terms. Excessive insurance costs or uninsured claims would increase our operating loss and affect our financial condition.

**Our corporate documents and Michigan law contain provisions that may make it more difficult for us to be acquired.**

Our Board of Directors has the authority, without shareholder approval, to issue additional shares of preferred stock and to fix the rights, preferences, privileges and restrictions of these shares without any further vote or action by our shareholders. This authority, together with certain provisions of our charter documents, may have the affect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire control of our company. This affect could occur even if our shareholders consider the change in control to be in their best interest.

**We are required to evaluate our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act of 2002 and any adverse results from such evaluation could have a negative market reaction.**

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002 (Section 404), beginning with this Annual Report on Form 10-K for the fiscal year ended June 30, 2005, we are required to furnish a report by our management on our internal control over financial reporting. That report must contain, among other matters, an assessment of the effectiveness of our internal control over financial reporting as of the end of the fiscal year, including a statement as to whether or not our internal control over financial reporting is effective. This assessment must include disclosure of any material weaknesses in our internal control over financial reporting identified by management. That report must also contain a statement that our independent registered public accounting firm has issued an attestation report on management's assessment of such internal controls. If in the future we are unable to assert that our internal control over financial reporting is effective as of the end of the then current fiscal year (or, if our independent registered public accounting firm are unable to attest that our management's report is fairly stated or they are unable to express an opinion on the effectiveness of our internal controls), we could lose investor confidence in the accuracy and completeness of our financial reports, which would have a negative effect on our stock price and our ability to raise capital.

**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 Securities Exchange Act. These forward-looking statements include statements regarding:

- potential strategic collaborations with others
- future capital needs

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- adequacy of existing capital to support operations for a specified time
- product development and marketing plan
- clinical trial plans and anticipated results
- anticipation of future losses
- replacement of manufacturing sources
- commercialization plans
- revenue expectations and operating results

These statements are subject to risks and uncertainties, including those set forth in this Business Risks section, and actual results could differ materially from those expressed or implied in these statements. All forward-looking statements included in this registration statement are made as of the date hereof. We assume no obligation to update any such forward-looking statement or to update any reason why actual results might differ.

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

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

We have completed an integrated audit of Aastrom Biosciences, Inc.'s 2005 consolidated financial statements and of its internal control over financial reporting as of June 30, 2005 and audits of its 2004 and 2003 consolidated financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Our opinions, based on our audits, are presented below.

**Consolidated Financial Statements and Financial Statement Schedule**

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of Aastrom Biosciences, Inc. and its subsidiaries (a development stage company) at June 30, 2005 and 2004, and the results of their operations and their cash flows for each of the three years in the period ended June 30, 2005, and for the period from March 24, 1989 (Inception) to June 30, 2005, in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. These financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit of financial statements 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 our opinion.

**Internal Control Over Financial Reporting**

Also, in our opinion, Management's Report on Internal Control Over Financial Reporting appearing under Item 9A, the Company maintained effective internal control over financial reporting as of June 30, 2005 based on criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), is fairly stated, in all material respects, based on those criteria. Furthermore, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of June 30, 2005, based on criteria established in *Internal Control — Integrated Framework* issued by the COSO. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express opinions on management's assessment and on the effectiveness of the Company's internal control over financial reporting based on our audit. We conducted our audit of internal control over financial reporting in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. An audit of internal control over financial reporting includes obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we consider necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PRICEWATERHOUSECOOPERS LLP  
Minneapolis, Minnesota  
September 9, 2005

**AASTROM BIOSCIENCES, INC.**  
**(a development stage company)**  
**CONSOLIDATED BALANCE SHEETS**

	June 30,	
	2004	2005
<b>ASSETS</b>		
<b>CURRENT ASSETS:</b>		
Cash and cash equivalents	\$ 16,926,000	\$ 14,408,000
Short-term investments	—	18,006,000
Receivables, net	244,000	193,000
Inventories	389,000	116,000
Other current assets	273,000	421,000
Total current assets	17,832,000	33,144,000
PROPERTY AND EQUIPMENT, NET	334,000	753,000
Total assets	<u>\$ 18,166,000</u>	<u>\$ 33,897,000</u>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES:</b>		
Accounts payable and accrued expenses	\$ 382,000	\$ 533,000
Accrued employee benefits	176,000	336,000
Total current liabilities	558,000	869,000
<b>COMMITMENTS AND CONTINGENCIES (Note 5 and 6)</b>		
<b>SHAREHOLDERS' EQUITY:</b>		
Common Stock, no par value; shares authorized — 150,000,000; shares issued and outstanding — 81,373,191 and 102,328,785, respectively	131,472,000	158,703,000
Deficit accumulated during the development stage	(113,864,000)	(125,675,000)
Total shareholders' equity	17,608,000	33,028,000
Total liabilities and shareholders' equity	<u>\$ 18,166,000</u>	<u>\$ 33,897,000</u>

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

**AASTROM BIOSCIENCES, INC.**  
**(a development stage company)**

**CONSOLIDATED STATEMENTS OF OPERATIONS**

	<u>Year Ended June 30,</u>			<u>March 24, 1989</u>
	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>(Inception) to</u> <u>June 30, 2005</u>
<b>REVENUES:</b>				
Product sales and rentals	\$ 314,000	\$ 49,000	\$ 387,000	\$ 1,118,000
Research and development agreements	10,000	75,000	—	2,105,000
Grants	520,000	1,178,000	522,000	8,048,000
Total revenues	<u>844,000</u>	<u>1,302,000</u>	<u>909,000</u>	<u>11,271,000</u>
<b>COSTS AND EXPENSES:</b>				
Cost of product sales and rentals	145,000	27,000	139,000	554,000
Cost of product sales and rentals — provision for excess inventories	748,000	253,000	9,000	2,239,000
Research and development	5,647,000	6,289,000	7,206,000	100,643,000
Selling, general and administrative	4,017,000	5,390,000	5,972,000	39,489,000
Total costs and expenses	<u>10,557,000</u>	<u>11,959,000</u>	<u>13,326,000</u>	<u>142,925,000</u>
LOSS FROM OPERATIONS	<u>(9,713,000)</u>	<u>(10,657,000)</u>	<u>(12,417,000)</u>	<u>(131,654,000)</u>
<b>OTHER INCOME (EXPENSE):</b>				
Other income	—	—	12,000	1,249,000
Interest income	134,000	169,000	594,000	5,965,000
Interest expense	—	—	—	(267,000)
Total other income	<u>134,000</u>	<u>169,000</u>	<u>606,000</u>	<u>6,947,000</u>
NET LOSS	<u>\$ (9,579,000)</u>	<u>\$ (10,488,000)</u>	<u>\$ (11,811,000)</u>	<u>\$ (124,707,000)</u>
NET LOSS PER SHARE (Basic and Diluted)	<u>\$ (.19)</u>	<u>\$ (.14)</u>	<u>\$ (.13)</u>	
Weighted average number of common shares outstanding (Basic and Diluted)	<u>50,984,000</u>	<u>73,703,000</u>	<u>93,541,000</u>	

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

**AASTROM BIOSCIENCES, INC.**  
**(a development stage company)**

**CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY AND COMPREHENSIVE LOSS**

	Preferred Stock		Common Stock		Deficit Accumulated During the Development Stage	Total Shareholders' Equity
	Shares	Amount	Shares	Amount		
BALANCE, MARCH 24, 1989 (Inception)	—	\$ —	—	\$ —	\$ —	\$ —
Net loss and comprehensive loss					(92,829,000)	(92,829,000)
Issuance of common stock for cash, services and license rights			1,195,124	2,336,000		2,336,000
Issuance of Series A through Series E Preferred Stock for cash, net of issuance costs of \$342,000	9,451,766	34,218,000				34,218,000
Issuance of Series E Preferred Stock at \$17.00 per share	205,882	3,500,000		(3,500,000)		—
Exercise of stock options and warrants, and issuance of stock under Employee Stock Purchase Plan			2,989,260	927,000		927,000
Issuance of Stock Purchase Rights for cash in September 1995 and March 1996				3,500,000		3,500,000
Principal payment received under shareholder note receivable				31,000		31,000
Initial public offering of common stock at \$7.00 per share, net of issuance costs of \$2,865,000			3,250,000	19,885,000		19,885,000
Conversion of preferred stock	(11,865,648)	(55,374,000)	21,753,709	55,374,000		—
Compensation expense related to stock options granted				654,000		654,000
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				9,930,000
Issuance of 1998 Series I Convertible Preferred Stock at \$1,000 per share, net of issuance costs of \$460,000	5,000	4,540,000	40,404	149,000		4,689,000
Issuance of 1999 Series III Convertible Preferred Stock at \$1,000 per share, net of issuance costs of \$280,000	3,000	2,720,000	49,994	90,000		2,810,000
Issuance of common stock, net of issuance costs of \$258,000			14,331,669	24,725,000		24,725,000
Dividends and yields on preferred stock		466,000	148,568	502,000	(968,000)	—
Repurchase and retirement of Common Shares outstanding			(32,171)	(73,000)		(73,000)
BALANCE, JUNE 30, 2002	—	—	43,726,557	104,600,000	(93,797,000)	10,803,000
Net loss and comprehensive loss					(9,579,000)	(9,579,000)
Exercise of stock options and issuance of stock under Employee Stock Purchase Plan			38,723	15,000		15,000
Compensation expense related to stock warrants granted			—	335,000		335,000
Issuance of common stock, net of issuance costs of \$342,000			21,047,142	10,001,000		10,001,000
BALANCE, JUNE 30, 2003	—	—	64,812,422	114,951,000	(103,376,000)	11,575,000
Net loss and comprehensive loss					(10,488,000)	(10,488,000)
Exercise of stock purchase warrants			236,534	121,000		121,000
Exercise of stock options and issuance of stock under Employee Stock Purchase Plan			45,919	24,000		24,000
Issuance of stock under Direct Stock Purchase Plan			5,453	5,000		5,000
Compensation expense related to stock options and warrants granted			—	425,000		425,000
Issuance of common stock, net of issuance costs of \$1,294,000			16,272,863	15,946,000		15,946,000
BALANCE, JUNE 30, 2004	—	—	81,373,191	131,472,000	(113,864,000)	17,608,000
Net loss and comprehensive loss					(11,811,000)	(11,811,000)
Exercise of stock purchase warrants			2,043,826	2,873,000		2,873,000
Exercise of stock options and issuance of stock under Employee Stock Purchase Plan			1,593,442	897,000		897,000
Issuance of stock under Direct Stock Purchase Plan			23,452	38,000		38,000
Compensation expense related to stock options granted			—	160,000		160,000
Issuance of common stock, net of issuance costs of \$5,629,000			17,294,874	23,263,000		23,263,000
BALANCE, JUNE 30, 2005	—	\$ —	102,328,785	\$ 158,703,000	\$ (125,675,000)	\$ 33,028,000

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

**AASTROM BIOSCIENCES, INC.**  
**(a development stage company)**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Year Ended June 30,			March 24, 1989 (Inception) to June 30, 2005
	2003	2004	2005	
<b>OPERATING ACTIVITIES:</b>				
Net loss	\$ (9,579,000)	\$ (10,488,000)	\$ (11,811,000)	\$ (124,707,000)
Adjustments to reconcile net loss to net cash used for operating activities:				
Depreciation and amortization	119,000	125,000	167,000	3,738,000
Loss on property held for resale	—	—	—	110,000
Amortization of discounts and premiums on investments	—	—	(68,000)	(611,000)
Stock compensation expense	335,000	425,000	160,000	1,584,000
Inventories write downs and reserves	748,000	253,000	9,000	2,239,000
Stock issued pursuant to license agreement	—	—	—	3,300,000
Provision for losses on accounts receivable	—	4,000	9,000	165,000
Changes in assets and liabilities:				
Receivables	(249,000)	100,000	42,000	(403,000)
Inventories	(253,000)	164,000	264,000	(2,451,000)
Other current assets	59,000	(86,000)	(148,000)	(400,000)
Accounts payable and accrued expenses	(183,000)	(24,000)	151,000	533,000
Accrued employee benefits	13,000	2,000	160,000	336,000
Net cash used for operating activities	(8,990,000)	(9,525,000)	(11,065,000)	(116,567,000)
<b>INVESTING ACTIVITIES:</b>				
Organizational costs	—	—	—	(73,000)
Purchase of short-term investments	—	—	(25,938,000)	(88,062,000)
Maturities of short-term investments	1,000,000	—	8,000,000	70,667,000
Property and equipment purchases	(119,000)	(157,000)	(586,000)	(3,658,000)
Proceeds from sale of property held for resale	—	—	—	400,000
Net cash provided by (used for) investing activities	881,000	(157,000)	(18,524,000)	(20,726,000)
<b>FINANCING ACTIVITIES:</b>				
Net proceeds from issuance of preferred stock	—	—	—	51,647,000
Net proceeds from issuance of common stock	10,016,000	16,096,000	27,071,000	97,746,000
Repurchase of common stock	—	—	—	(49,000)
Payments received for stock purchase rights	—	—	—	3,500,000
Payments received under shareholder notes	—	—	—	31,000
Principal payments under capital lease obligations	—	—	—	(1,174,000)
Net cash provided by financing activities	10,016,000	16,096,000	27,071,000	151,701,000
<b>NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS</b>	1,907,000	6,414,000	(2,518,000)	14,408,000
<b>CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD</b>	8,605,000	10,512,000	16,926,000	—
<b>CASH AND CASH EQUIVALENTS AT END OF PERIOD</b>	\$ 10,512,000	\$ 16,926,000	\$ 14,408,000	\$ 14,408,000
<b>SUPPLEMENTAL CASH FLOW INFORMATION:</b>				
Interest paid	\$ —	\$ —	\$ —	\$ 267,000
Equipment acquired under capital lease obligations	\$ —	\$ —	\$ —	\$ 1,174,000

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

**AASTROM BIOSCIENCES, INC.**  
**(a development stage company)**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. Organization and Summary of Significant Accounting Policies**

Aastrom Biosciences, Inc. was incorporated in March 1989 (Inception), began employee-based operations in 1991, and is in the development stage. The Company operates its business in one reportable segment — research and product development, conducted both on its own behalf and in connection with various collaborative research and development agreements with others, involving the development of proprietary cell-based therapeutics for tissue regeneration.

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

The Company is subject to certain risks related to the operation of its business and development of its products and product candidates. While management believes available cash, cash equivalents and short-term investments are adequate to finance currently planned activities beyond the end of fiscal year 2006 (ending June 30, 2006), the Company will need to raise additional funds in order to complete its product development programs, complete clinical trials needed to market its products, and commercialize additional product candidates. The Company cannot be certain that such funding will be available on favorable terms, if at all. Some of the factors that will impact the Company's ability to raise additional capital and its overall success include: the rate and degree of progress for its product development, the rate of regulatory approval to proceed with clinical trial programs, the requirements for marketing authorization from regulatory bodies in the U.S., EU and other countries, the liquidity and market volatility of the Company's equity securities, regulatory and manufacturing requirements and uncertainties, technological developments by competitors, and other factors. If the Company cannot raise such funds, it may not be able to develop or enhance products, take advantage of future opportunities, or respond to competitive pressures or unanticipated requirements, which would negatively impact its business, financial condition and results of operations.

*Significant Revenue Relationships* — One collaborator accounted for 18% of total revenues for the period from Inception to June 30, 2005. However, for the fiscal year ended June 30, 2005, there was no revenue recognized from this source. Grant revenues consist of grants received from federal and state agencies.

*Suppliers* — Some of the key components used to manufacture the Company's TRC cell products come from single or limited sources of supply.

*Principles of Consolidation* — The consolidated financial statements include the accounts of Aastrom and its wholly-owned subsidiary, Aastrom Biosciences GmbH, formerly Zellera AG, located in Berlin, Germany, (collectively, the Company). All significant inter-company transactions and accounts have been eliminated in consolidation. As of June 30, 2005, Aastrom Biosciences GmbH has only limited operations and is not currently a significant component of the consolidated financial statements. In June 2005, Aastrom formed a wholly-owned subsidiary, Aastrom Biosciences, Ltd., located in Dublin, Ireland. During fiscal year 2005, Aastrom Biosciences, Ltd. incurred no operating costs.

*Cash and Cash Equivalents* — Cash and cash equivalents include cash and highly liquid short-term investments with original maturities of three months or less at the time of purchase.

*Short-Term Investments* — Short-term investments consist of highly rated corporate debt securities 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 accumulated other comprehensive income within shareholders' equity. Interest earned on available-for-sale securities is included in interest income. Discounts or premiums arising at acquisition of these investments are amortized over the remaining term of the investment and reported as interest income. Through June 30, 2005, the Company has not experienced unrealized gains or losses on its investments.

**AASTROM BIOSCIENCES, INC.**  
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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

*Diversity of Credit Risk* — The Company invests its excess cash in U.S. government securities and highly rated corporate debt securities and has established guidelines relative to diversification and maturities in an effort to limit risk. 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.

*Accounts Receivable* — The Company makes estimates evaluating collectibility of accounts receivable. The Company continuously monitors collections and payments from its customers and maintains an allowance for estimated credit losses based on any specific customer collection issues that are identified. While such credit issues have not been significant, there can be no assurance that the Company will continue to experience the same level of credit losses in the future. The allowance for doubtful accounts was \$7,000 and \$16,000 at June 30, 2004 and 2005, respectively.

*Inventories* — The Company values its inventories that consist primarily of the AastromReplicell System and our disposable cell production cassettes and base medium, at the lower of cost (specific identification using the first in, first out method) or market. The Company regularly reviews inventory quantities on hand and records a provision to write down excess inventories to their estimated net realizable value.

- *AastromReplicell System (ARS) Inventories* — Based upon market conditions and our historical experience with the ARS product line, the carrying value of its aggregate ARS inventories is reduced if such inventories are held in excess of twelve months without sale because the probability-weighted selling price of the aggregate inventories declines after inventory has been on-hand for more than twelve months. We continue to reduce the aggregate carrying value of ARS inventories over the ensuing six months if the inventories are not sold. The carrying value of ARS inventories under evaluation at potential customer sites are not reduced so long as the estimated selling price (less selling costs) exceeds the carrying value of the inventories under evaluation. Pursuant to this accounting policy we recorded provisions to reduce the carrying value of the ARS inventories by \$253,000 and \$9,000 in fiscal years ending June 30, 2004 and 2005, respectively. Additionally, in fiscal year 2005, we recorded a charge of \$90,000 to research and development expense for excess ARS inventories that were re-deployed for clinical use. As of June 30, 2005, the carrying value of our ARS inventories was reduced to zero. Based upon our current business strategy, we do not expect to generate revenues from the sale of ARS inventories in future periods.
- *Cell Cassette and Base Medium Inventories* — We maintain cell cassette and base medium inventories for sale to existing customers and clinical sites. We evaluate the net realizable value of these inventories considering expected future sales quantities, prices and timing, and considering the limited shelf life of these inventories.

*Property and Equipment* — Property and equipment is recorded at cost and depreciated or amortized using the straight-line method over the estimated useful life of the asset (primarily three to five years) or the underlying lease term for leasehold improvements, whichever is shorter. Depreciation expense was \$119,000, \$125,000, \$167,000 and \$3,738,000 for the years ended June 30, 2003, 2004, 2005 and for the period from Inception to June 30, 2005, respectively. During fiscal year 2005 the Company acquired equipment that it intends to use in the future in a specialized facility under the Company's control, for the production of human cells. The cost of this equipment is \$111,000 and has been included in property and equipment as equipment in process. The equipment will be depreciated over its useful life beginning when the equipment is placed into service. When assets are disposed of, the cost and accumulated depreciation are removed from the accounts. Repairs and maintenance are charged to expense as incurred.

*Revenue Recognition* — Revenue is generated from grants and research agreements, collaborative agreements, product sales and rentals. Revenue from grants and research agreements is recognized on a cost

**AASTROM BIOSCIENCES, INC.**  
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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

reimbursement basis consistent with the performance requirements of the related agreement. Revenue from collaborative agreements is recognized when the scientific or clinical results stipulated in the agreement have been met and there are no ongoing obligations on the Company's part. Revenue from product sales is recognized when title to the product transfers and there are no remaining obligations that will affect the customer's final acceptance of the sale. If there are remaining obligations, including training and installation (which the Company believes to be significant), revenue is not recognized until the completion of these obligations. Revenue from licensing fees under licensing agreements and rental revenue is recognized when there are no future performance obligations remaining with respect to such revenues. Payments received before all obligations are fulfilled are classified as deferred revenue.

Revenues include rental revenue of \$37,000, \$37,000, \$0 and \$93,000, for the years ended June 30, 2003, 2004, 2005 and for the period from Inception to June 30, 2005, respectively. This revenue was generated from AastromReplicell System rental agreements that have since expired or have been terminated. Based upon our current business strategy we do not expect to generate rental revenues in future periods.

*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 \$418,000 and \$527,000 for the years ended June 30, 2004 and 2005, respectively and \$2,590,000 for the period from Inception to June 30, 2005. There were no such costs and expenses for the year ended June 30, 2003.

*Stock Compensation* — The Company has a 2004 Omnibus Equity Incentive Plan (2004 Plan) that was adopted to provide an incentive program that would enable the Company to attract and retain employees, consultants, and directors. The 2004 Plan permits the grant of stock options, stock appreciation rights, restricted stock purchase rights, restricted stock awards, restricted stock units, and deferred stock units. At the time of shareholder approval of this plan in November 2004, this plan replaced the 2001 Stock Option Plan, which had been used for stock option grants since 2001. The Company accounts for these plans under the recognition and measurement principles of APB Opinion No. 25, "Accounting for Stock Issued to Employees" and related Interpretations. The following table illustrates the effect on net loss and net loss per share if the Company had applied the fair value recognition provisions of Statement of Financial Accounting Standards (SFAS) No. 123, "Accounting for Stock-Based Compensation":

	Year Ended June 30,		
	2003	2004	2005
Reported net loss	\$ (9,579,000)	\$ (10,488,000)	\$ (11,811,000)
Add: Stock-based employee compensation expense included in reported net loss	—	372,000	160,000
Deduct: Stock-based employee compensation expense determined under fair value based method for all awards	(829,000)	(1,352,000)	(721,000)
Pro forma net loss	<u>\$ (10,408,000)</u>	<u>\$ (11,468,000)</u>	<u>\$ (12,372,000)</u>
Earnings per share:			
As reported	\$ (.19)	\$ (.14)	\$ (.13)
Pro forma	\$ (.20)	\$ (.16)	\$ (.13)

**AASTROM BIOSCIENCES, INC.**  
**(a development stage company)**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

The fair value of options was estimated at the date of grant using the Black-Scholes option pricing model with the following assumptions:

	Year Ended June 30,		
	2003	2004	2005
Dividend rate	None	None	None
Expected stock price volatility	120%	60%	72%
Risk-free interest rate	2.5% - 3.3%	3.1% - 3.9%	3.5% - 3.9%
Expected life of options	5 years	5 years	5 years

The weighted average fair value of options granted during the years ended June 30, 2003, 2004 and 2005 was \$.28, \$1.60 and \$1.33 per share, respectively.

*Income Taxes* — Income taxes are accounted for in accordance with SFAS No. 109, "Accounting for Income Taxes." Deferred tax assets are recognized for deductible temporary differences and tax credit carryforwards and deferred tax liabilities are recognized for taxable temporary differences. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized.

*Net Loss Per Share* — Net loss per common share is computed using the weighted-average number of common 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. The aggregate number of common equivalent shares that have been excluded from the computations of net loss per common share for the periods ended June 30, 2003, 2004 and 2005 is approximately 5,144,000, 10,104,661 and 9,339,502, respectively.

*Use of Estimates* — The preparation of financial statements in accordance with generally accepted accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reported period. Actual results could differ from those estimates.

*Financial Instruments* — The Company's financial instruments include cash equivalents, short-term investments, accounts receivable and accounts payable for which the current carrying amounts approximate fair market value based upon their short-term nature.

*Long-Lived Assets* — The Company reviews its long-lived assets for impairment whenever an event or change in circumstances indicates that the carrying values of an asset may not be recoverable. If such an event or change in circumstances occurs and potential impairment is indicated because the carrying values exceed the estimated future undiscounted cash flows of the asset, the Company would measure the impairment loss as the amount by which the carrying value of the asset exceeds its fair value. No significant impairment losses have been identified by the Company for any of the periods presented in the accompanying financial statements.

*Reclassifications* — To conform prior period amounts to current year classifications, the Company has reclassified interest receivable of \$2,000 at June 30, 2004 from receivables to other current assets. Interest receivable at June 30, 2005 is \$116,000. This reclassification had no impact on the Company's previously reported current assets, results of operations or cash flows.

*New Accounting Standards* — In November 2004, the Financial Accounting Standards Boards (FASB) issued Statements of Financial Accounting Standards No. 151, "Inventory Costs" (SFAS 151), an

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

amendment of Accounting Research Bulletin No. 43, "Inventory Pricing". SFAS.151 requires all companies to recognize a current-period charge for abnormal amounts of idle facility expense, freight, handling costs and wasted materials. The statement also requires that the allocation of fixed production overhead to the costs of conversion be based on the normal capacity of the production facilities. This new standard will be effective for the Company beginning in fiscal year 2006. The Company does not expect SFAS 151 to have a material impact on its results of operations or financial position.

In December 2004, the Financial Accounting Standards Board (FASB) issued Statements of Financial Accounting Standards No. 123R, "Share-Based Payment" (SFAS 123R), which requires companies to measure and recognize compensation expense for all employee stock-based payments at fair value and recognized expense over the service period underlying the arrangement. Pursuant to Securities and Exchange Commission (SEC) rules, SFAS 123R is effective for all annual periods beginning after June 15, 2005. The Company is required to adopt SFAS 123R effective July 1, 2005 and is currently evaluating the impact of SFAS 123R on its financial statements. Management expects that SFAS 123R will result in an increase in operating expenses in future periods.

## 2. Selected Balance Sheet Information

*Receivables* — Receivables consists of amounts due to the Company for product sales and rentals and research services provided under terms of government grants, and are presented net of allowances for doubtful accounts of \$7,000 and \$16,000 at June 30, 2004 and 2005, respectively.

*Restricted Investments* — Included in other current assets at June 30, 2004 and 2005 are \$81,000 and \$91,000, respectively, of bank certificates of deposit which serve as collateral for certain potential European Value Added Taxes.

*Property and Equipment* — Property and equipment consists of the following:

	June 30,	
	2004	2005
Machinery and equipment	\$ 1,610,000	\$ 1,405,000
Office equipment	1,050,000	807,000
Leasehold improvements	622,000	622,000
Equipment in process	—	111,000
Equipment under lease to third parties	217,000	—
	3,499,000	2,945,000
Less accumulated depreciation and amortization	(3,165,000)	(2,192,000)
	<u>\$ 334,000</u>	<u>\$ 753,000</u>

**AASTROM BIOSCIENCES, INC.**  
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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

*Accounts Payable and Accrued Expenses* — Accounts payable and accrued expenses consists of the following:

	<u>June 30,</u>	
	<u>2004</u>	<u>2005</u>
Accounts payable	\$ 186,000	\$ 216,000
Accrued expenses:		
Clinical studies	8,000	48,000
Professional services	87,000	124,000
Manufacturing and engineering	47,000	53,000
Deferred revenue	42,000	—
Other	12,000	92,000
	<u>\$ 382,000</u>	<u>\$ 533,000</u>

### 3. Shareholders' Equity

*Stock Option Plans* — The Company has various stock option plans (Option Plans) and agreements that provide for the issuance of nonqualified and incentive stock options to acquire up to 4,436,675 shares of common stock. Such options may be granted by the Company's Board of Directors to certain of the Company's employees, directors and consultants. 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.

Following shareholder approval of the 2001 Stock Option Plan the Company agreed that it would not grant additional options under the 1992 Stock Option Plan or the 1996 Outside Director Stock Option Plan. Any shares that are issuable upon expiration or cancellation of options previously granted under the 1992 Stock Option Plan or the 1996 Outside Director Stock Option Plan will not be available for future grants under those plans or the 2001 Stock Option Plan.

In November 2004, the shareholders approved the 2004 Omnibus Equity Incentive Plan (the "2004 Plan"). The 2004 Plan provides incentives through the grant of stock options (including indexed options), stock appreciation rights, restricted stock purchase rights, restricted stock awards, restricted stock units and deferred stock units. The exercise price of stock options granted under the 2004 Plan shall not be less than the fair market value of the shares on the date of grant. The 2004 Plan replaced the 2001 Stock Option Plan and no new awards will be granted under the 2001 Stock Option Plan. However, any shares that are issuable upon expiration or cancellation of options previously granted under the 2001 Stock Option Plan will be available for future grants under the 2004 Plan.

The Company also grants non-qualified options to purchase 12,000 shares of common stock to each outside director on the day following the Annual Meeting of Shareholders or upon their appointment as a director. The exercise price of non-qualified stock options shall be the fair market value on the date of grant. These options generally vest over a one-year period and expire ten years after the date of grant.

**AASTROM BIOSCIENCES, INC.**  
**(a development stage company)**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

The following table summarizes option activity:

	<u>Options Outstanding</u>	<u>Options Available for Grant Under Option Plans</u>	<u>Weighted Average Exercise Price Per Share</u>	<u>Options Exercisable at Period End</u>
March 24, 1989 (Inception)				
Options authorized	—	8,049,927		
Options terminated with approval of 2001 Plan	—	(808,206)		
Options canceled	(2,544,244)	2,444,244	\$ 3.79	
Options granted	7,920,965	(7,820,965)	\$ 2.02	
Options exercised	(1,847,619)	—	\$ .43	
Balance, June 30, 2002	3,529,102	1,865,000	\$ 1.58	1,331,815
Options authorized	—	—		
Options terminated with approval of 2001 Plan	—	(254,080)		
Options canceled	(402,830)	402,830	\$ 1.56	
Options granted	1,223,650	(1,223,650)	\$ .38	
Options exercised	(4,163)	—	\$ 1.15	
Balance, June 30, 2003	4,345,759	790,100	\$ 1.24	1,925,884
Options authorized	—	2,000,000		
Options terminated with approval of 2001 Plan	—	(3,333)		
Options canceled	(203,333)	203,333	\$ .41	
Options granted	819,000	(819,000)	\$ 1.60	
Options exercised	(5,000)	—	\$ 1.20	
Balance, June 30, 2004	4,956,426	2,171,100	\$ 1.33	3,118,094
Options authorized	—	3,000,000		
Options abandoned with approval of 2004 Plan	—	(734,425)		
Options canceled	(727,159)	296,612	\$ 1.16	
Options granted	1,410,750	(676,325)	\$ 1.33	
Options exercised	(1,554,064)	—	\$ .84	
Balance, June 30, 2005	<u>4,085,953</u>	<u>4,056,962</u>	\$ 1.55	1,782,871

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

The following table summarizes information about stock-based compensation plans as of June 30, 2005:

<u>Range of Exercise Prices</u>	<u>Number of Options Outstanding</u>	<u>Remaining Contractual Life — Years</u>	<u>Weighted Average Exercise Price</u>	<u>Number Exercisable</u>	<u>Weighted Average Exercise Price of Exercisable Options</u>
\$ .31 - \$ .99	1,325,484	8.0	\$ .64	444,251	\$ .60
\$1.05 - \$2.05	1,762,536	7.8	\$ 1.35	521,687	\$ 1.36
\$2.44 - \$2.95	673,400	5.3	\$ 2.91	661,400	\$ 2.91
\$3.20 - \$4.75	324,533	1.3	\$ 3.20	155,533	\$ 3.20
	<u>4,085,953</u>		\$ 1.55	<u>1,782,871</u>	\$ 1.92

Effective July 1, 2000, the Company adopted Financial Accounting Standards Board Interpretation Number 44 to APB 25 (Interpretation No. 44) as it related to an effective re-pricing of options to purchase 759,000 shares of common stock issued by the Company in December 1999 to certain employees. Under this rule, a charge to expense was required for subsequent increases in the market price of the Company's common stock above \$2.41 per share. Such charges continued until such options were exercised, forfeited or otherwise expired. During fiscal years 2003 and 2004, there was no charge to expense because the Company's common stock price did not exceed \$2.41 per share. During fiscal year 2005, the Company recorded a \$59,000 charge to selling, general and administrative expenses related to these options.

*Employee Stock Purchase Plan* — The Company had an employee stock purchase plan under which eligible employees could purchase common stock, at a discount to the market price, through payroll deductions of up to 10% of the employee's base compensation, subject to certain limitations, during sequential 24-month offering periods. Each offering period was 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 was purchased under the plan for such offering period was 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 years ended June 30, 2003, 2004 and 2005, 34,560 shares, 40,919 shares and 39,017 shares, respectively, of common stock were purchased under this plan. From Inception to June 30, 2005, 231,491 shares were purchased under this plan. The Employee Stock Purchase plan was terminated effective March 1, 2005.

*Stock Purchase Warrants Issued for Services* — In August 2002, the Company issued a warrant to SBI USA, LLC for investment banking services. The warrant entitled the holder to purchase up to 2,000,000 shares of common stock at \$0.75 per share through August 23, 2003. As a result of the issuance of this warrant the Company recorded \$159,000 in selling, general and administrative expenses which represents the fair value of the warrants. Subsequently, in February 2003, by mutual agreement of both parties this warrant was canceled.

In December 2002, the Company issued warrants in connection with an agreement for public and investor relations services. Under the terms of this agreement, the holder was entitled to purchase up to 600,000 shares of common stock at \$0.75 per share through December 19, 2004. As a result of this agreement the Company recorded \$163,000 in selling, general and administrative expenses during the year ended June 30, 2003 which represented the fair value of the warrants. At June 30, 2005 none of these warrants were outstanding.

In February 2003, the Company issued warrants to two individuals who performed public and investor relations services. Under the terms of this agreement, the holders were entitled to purchase up to 100,000 shares of common stock at \$0.50 through February 4, 2004. As a result of this agreement, the Company recorded \$13,000 in selling, general and administrative expenses during the year ended June 30,

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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

2003 which represented the fair value of the warrants. At June 30, 2005 none of these warrants were outstanding.

In June 2003, the Company agreed, subject to a placement agreement to issue a warrant to purchase up to 97,595 shares of common stock at \$0.91 through June 6, 2005. A placement was completed in June 2003. The estimated fair value of these warrants was \$54,000 and they were recorded as common stock issuance costs during the year ended June 30, 2003. At June 30, 2005 none of these warrants were outstanding.

In August 2003, the Company issued warrants to two individuals who performed public and investor relations services. Under the terms of this agreement, the holders were entitled to purchase up to 100,000 shares of common stock for \$0.50 through August 4, 2004. As a result of this agreement the Company recorded \$53,000 in selling, general and administrative expenses during the year ended June 30, 2004 which represented the fair value of the warrants. At June 30, 2005, none of these warrants were outstanding.

The fair value of all warrants issued in fiscal year 2003 were determined at the date of grant using the Black-Scholes option-pricing model at an expected stock price volatility of 120% and risk-free interest rates that ranged from 1.25% to 1.87%. The fair value of all warrants issued in fiscal year 2004 were determined at the date of grant using the Black-Scholes option-pricing model at an expected stock price volatility of 120% and a risk-free interest rate of 1.26%. These warrants were issued in private transactions to investors who agreed to acquire the warrants for investment purposes, such that the transactions were exempt from shareholder approval and registration pursuant to Section 4(2) of the Securities Act.

*Stock Purchase Warrants* — In July 2003, the Company issued 5,058,824 shares of common stock to multiple private placement investors, for gross proceeds of approximately \$4,300,000. As part of this transaction, the Company issued warrants to the private placement investors, exercisable for 4 years, or until July 9, 2007, to purchase up to 1,264,706 shares of common stock at \$1.23, as well as warrants to purchase up to 1,011,765 shares of common stock at \$1.50 per share prior to October 31, 2003. These later warrants expired unexercised. In addition, warrants to purchase 303,529 shares of common stock were issued to a private placement agent, exercisable for 4 years, or until July 9, 2007, at a price of \$1.23. At June 30, 2005, warrants to purchase up to 1,014,706 shares of common stock pursuant to these warrants remained outstanding.

In April 2004, the Company issued 8,000,000 shares of common stock through a registered direct offering to institutional investors, for gross proceeds of approximately \$9,100,000. As part of this transaction, the Company issued warrants to the institutional investors, exercisable for 5 years, or until April 5, 2009, subject to mandatory exercise at the Company's option, in certain circumstances of stock price escalation after April 5, 2006, to purchase up to 2.4 million shares of common stock at an exercise price of \$1.65 per share. In addition, the Company issued warrants to the placement agent, exercisable for 5 years, or until April 5, 2009, subject to mandatory exercise at the Company's option, in certain circumstances of stock price escalation after April 5, 2005, to purchase up to 560,000 shares of common stock at an exercise price of \$1.65 per share. At June 30, 2005, warrants to purchase up to 2.4 million shares of common stock pursuant to these warrants remained outstanding.

In October 2004, the Company issued 8,264,463 shares of common stock through a registered direct offering to institutional investors, for aggregate gross cash proceeds of approximately \$10,000,000. As part of this transaction, the Company issued warrants to the institutional investors, exercisable from April 28, 2005 through October 27, 2008, to purchase up to 2,066,116 shares of common stock at an exercise price of \$1.74 per share. In addition, the Company issued warrants to the placement agent, exercisable from April 28, 2005 through October 27, 2008, to purchase up to 495,868 shares of common stock at an exercise price of \$1.74 per share. At June 30, 2005, warrants to purchase up to 1,838,843 shares of common stock pursuant to these warrants remained outstanding.

**AASTROM BIOSCIENCES, INC.**  
**(a development stage company)**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

*Common Shares Reserved* — As of June 30, 2005, the Company has reserved shares of common stock for future issuance as follows:

Issuance under stock option and stock purchase plans	14,411,240
Issuance under stock purchase warrants	5,253,549
	<u>19,664,789</u>

No cash dividends have been declared or paid by the Company since its inception.

**4. Income Taxes**

A reconciliation of income taxes computed using the federal statutory rate to the taxes reported in our consolidated statements of operations is as follows:

	Year Ended June 30,		
	2003	2004	2005
Loss before income taxes	\$ 9,579,000	\$ 10,488,000	\$ 11,811,000
Federal statutory rate	34%	34%	34%
Taxes computed at federal statutory Rate	(3,257,000)	(3,566,000)	(4,015,000)
State taxes, net of federal taxes	—	—	(354,000)
Increase (decrease) in taxes from:			
Stock compensation	114,000	145,000	(80,000)
Other, net	5,000	5,000	(85,000)
Valuation allowance	3,138,000	3,416,000	4,534,000
Reported income taxes	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

Deferred tax assets consist of the following:

	June 30,	
	2004	2005
Net operating loss carryforwards	\$ 16,650,000	\$ 21,200,000
Research and development credit carryforwards	485,000	685,000
Inventories	451,000	435,000
Property and equipment	(145,000)	130,000
Other, net	(84,000)	100,000
Total deferred tax assets	17,357,000	22,550,000
Valuation allowance	(17,357,000)	(22,550,000)
Net deferred tax assets	<u>\$ —</u>	<u>\$ —</u>

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.

The Company has issued shares of common stock in prior years, which resulted in multiple ownership changes under Section 382 of the Internal Revenue Code. Consequently, the utilization of net operating loss and tax credit carryforwards is significantly limited due to the multiple ownership changes, which have occurred. Such limitations may result in these carryforwards expiring before the Company utilizes them. At

**AASTROM BIOSCIENCES, INC.**  
**(a development stage company)**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

June 30, 2005 the Company estimates the maximum Federal tax net operating loss and tax credit carryforwards, which could be utilized, were \$57,200,000 and \$700,000, respectively, which will expire from 2006 through 2026, if not utilized. The Company's ability to utilize its net operating loss and tax credit carryforwards may become subject to further annual limitation in the event of future change in ownership.

**5. Licenses, Royalties and Collaborative Agreements and Commitments**

*University of Michigan* — In August 1989, the Company entered into a research agreement with the University of Michigan (the University). In March 1992, and as provided for under the research agreement, the Company also 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. Such royalties have totaled approximately \$4,400 since inception.

*Corning Incorporated* — In December 2002, the Company entered into an agreement with Corning Incorporated that granted them an exclusive sublicense relating to the Company's cell transfection technology. Under the terms of the agreement, the Company retains exclusive rights to the applications of the technologies involving cells for therapeutic applications. The sublicense agreement also provided for the Company to receive an up-front fee of \$10,000 and a one-time fee of \$50,000 due thirty days after the one-year anniversary of the effective date of the agreement. The upfront fee was received in fiscal year 2003 and the anniversary fee was received in fiscal year 2004. These fees were recorded as research and development agreements revenue. In addition, the agreement provides for future royalty payments on net sales of licensed products sold under the sublicense amounting to 5% of such sales up to \$50 million. However, the Company does not expect to receive material revenue from this source for several years, if ever.

*Musculoskeletal Transplant Foundation* — In June 2003, the Company entered into a strategic alliance with Musculoskeletal Transplant Foundation (MTF) to jointly develop and commercialize treatments for the regeneration of tissues such as bone and cartilage. Under the terms of the alliance, the companies will provide each other with rights to their technologies for treatments and products that are based on combinations of MTF's matrices and Aastrom's TRCs. The companies will share in development and clinical trial expenses for these treatment approach products, and will adopt a coordinated promotion and marketing strategy for future products.

*Manufacture, Supply and Other Agreements* — The Company has entered into various agreements relating to the manufacture of its products and the supply of certain components. Pursuant to one such agreement, the Company made annual renewal payments of \$1,000,000, due in advance, in March of each year during the initial term of the agreement, which ended in 2001. The license agreement was extended through March 2003, with no additional annual renewal fees due. If the manufacturing or supply agreements expire or are otherwise terminated, the Company may not be able to identify and obtain ancillary materials that are necessary to develop our product and such expiration and termination could have a material affect on our business.

**6. Operating Lease and Purchase Order Commitments**

As of June 30, 2005, the Company leases its office and research facility under a month-to-month operating lease. Rent expense for the years ended June 30, 2003, 2004 and 2005, was \$602,000, \$616,000 and \$626,000, respectively, and \$5,705,000 for the period from Inception to June 30, 2005.

As of June 30, 2005, the Company has open purchase order commitments totaling \$247,000.

**AASTROM BIOSCIENCES, INC.**  
**(a development stage company)**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**7. Employee Savings Plan**

The Company has a 401(k) savings plan that 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 matching contributions to the plan. The Company has made contributions of \$109,000, \$121,000 and \$137,000 for the years ended June 30, 2003, 2004 and 2005, respectively and \$513,000 for the period from Inception to June 30, 2005.

**8. Quarterly Financial Data (Unaudited)**

<u>Year Ended June 30, 2005</u>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>	<u>Fiscal Year</u>
Revenues	\$ 187,000	\$ 374,000	\$ 252,000	\$ 96,000	\$ 909,000
Loss from operations	(2,709,000)	(2,550,000)	(3,553,000)	(3,605,000)	(12,417,000)
Net loss	(2,649,000)	(2,453,000)	(3,349,000)	(3,360,000)	(11,811,000)
Net loss per common share	(.03)	(.03)	(.03)	(.03)	(.13)

<u>Year Ended June 30, 2004</u>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>	<u>Fiscal Year</u>
Revenues	\$ 300,000	\$ 376,000	\$ 416,000	\$ 210,000	\$ 1,302,000
Loss from operations	(2,886,000)	(2,440,000)	(2,528,000)	(2,803,000)	(10,657,000)
Net loss	(2,838,000)	(2,403,000)	(2,500,000)	(2,747,000)	(10,488,000)
Net loss per common share	(.04)	(.03)	(.03)	(.03)	(.14)

The summation of quarterly earnings per share computations may not equate to the year-end computation as the quarterly computations are performed on a discrete basis.

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**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

There are none to report.

**Item 9A. Controls and Procedures**

**Disclosure Controls and Procedures**

As required by Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended, we conducted an evaluation under the supervision and with the participation of our management, including the Company's Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our current disclosure controls and procedures were effective in ensuring that all information required to be disclosed in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms.

**Management's Report on Internal Control over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13(a) — 15(f) under the Exchange Act. Our internal control over financial reporting is a process designed under the supervision of our Chief Executive Officer and Chief Financial Officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. Management evaluated the effectiveness of our internal control over financial reporting using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control — Integrated Framework. Management, under the supervision and with the participation of the Company's Chief Executive Officer and Chief Financial Officer, assessed the effectiveness of our internal control over financial reporting as of June 30, 2005 and concluded that it was effective.

Our independent registered public accounting firm, PricewaterhouseCoopers LLP, has audited the effectiveness of our internal control over financial reporting and management's assessment of the effectiveness of our internal control over financial reporting as of June 30, 2005, and has expressed unqualified opinions thereon in their report which appears under Item 8.

**Changes in Internal Control over Financial Reporting**

During our fourth quarter of fiscal 2005 there were no changes made in our internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

**Item 9B. Other Information**

Not applicable.

### PART III

Certain information required by Part III is omitted from this Report, and is incorporated by reference to our definitive Proxy Statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A in connection with our 2005 Annual Meeting of Shareholders to be held on November 2, 2005.

**Item 10. *Directors and Executive Officers of the Registrant***

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

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 our equity securities by certain beneficial owners and management is incorporated by reference to the Proxy Statement as set forth under the caption "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 in Compensation Decisions."

**Item 14. *Principal Accountant Fees and Services***

The information relating to certain relationships and related transactions is incorporated by reference to the Proxy Statement under the caption "Ratification of Appointment of Independent Registered Public Accounting Firm".

**PART IV**

**Item 15. Exhibits and Financial Statement Schedule**

(a) The following documents are filed as part of this Report:

1. Financial Statements (see Item 8).
2. All information is included in the Financial Statements or Notes thereto.
3. Exhibits:  
See Exhibit Index.



**EXHIBIT INDEX**

<u>Number</u>	<u>Notes</u>	
3.1	D	Restated Articles of Incorporation of Aastrom, as amended
3.2		Bylaws, as amended.
10.1#	A	Form of Indemnification Agreement.
10.2#	A	Amended and Restated 1992 Incentive and Non-Qualified Stock Option Plan and forms of agreements thereunder.
10.3#	A	1996 Outside Directors Stock Option Plan and forms of agreements thereunder.
10.20#	A	Form of Employment Agreement.
10.21	A	License Agreement, dated July 17, 1992, between J.G. Cremonese and Aastrom and related addenda thereto dated July 14, 1992 and July 7, 1993.
10.26	A	License Agreement, dated March 13, 1992, between Aastrom and the University of Michigan and amendments thereto dated March 13, 1992, October 8, 1993 and June 21, 1995.
10.27#	A	Employee Proprietary Information and Invention Agreement, effective June 1, 1991, between Aastrom and R. Douglas Armstrong.
10.70	B	Seventh Amendment to Office Lease.
10.72#	B	Aastrom Biosciences 2001 Stock Option Plan.
10.76	C	Master Supply Agreement with Astro Instrumentation, LLC
10.77	E	Supply Agreement between Aastrom and Moll Industries, Inc., dated December 16, 2003
10.78#	F	Employment Agreement with James Cour dated June 11, 2004.
10.79#	F	Employment Agreement with Janet Hock dated September 1, 2004.
10.80#	F	Employment Agreement with R. Douglas Armstrong dated August 27, 2004.
10.81#	F	Amended and Restated Employment Agreement with Brian Hampson dated August 27, 2004.
10.82#	F	2004 Omnibus Equity Incentive Plan.
10.83#	G	Employment Agreement with Robert Bard dated March 1, 2005.
10.84#		Form of Option and Restricted Stock Award Agreements for Grants under 2004 Omnibus Equity Incentive Plan.
10.85		Employee Compensation Guidelines.
10.86#		Employment Agreement with Gerald D. Brennan, Jr. dated June 10, 2005.
10.87		Amendment dated December 5, 2002 to License Agreement with the University of Michigan.
21		Subsidiaries of Registrant.
23.1		Consent of Independent Registered Public Accounting Firm.
31		Rules 13a-14(a) and 14d-14(a) Certifications.
32		Section 1350 Certifications.

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

B Incorporated by reference to Aastrom's Annual Report on Form 10-K for the year ended June 30, 2002.

C Incorporated by reference to Aastrom's Annual Report on Form 10-K for the year ended June 30, 2003.

D Incorporated by reference to Aastrom's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003.

E Incorporated by reference to Aastrom's Annual Report on Form 10-K for the year ended June 30, 2004.

F Incorporated by reference to Aastrom's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004.

G Incorporated by reference to Aastrom's Quarterly Report on Form 10-Q for the quarter ended March 31, 2005.

# Management contract or compensatory plan or arrangement covering executive officers or directors of Aastrom.



**SCHEDULE II**  
**VALUATION AND QUALIFYING ACCOUNTS**

	Years Ended June 30,		
	2003	2004	2005
<b>Allowance for Doubtful Accounts:</b>			
Balance at beginning of year	\$ 34,000	\$ 31,000	\$ 7,000
Additions charged to income	—	4,000	9,000
Write-offs, net of recoveries	(3,000)	(28,000)	—
Balance at end of year	<u>\$ 31,000</u>	<u>\$ 7,000</u>	<u>\$ 16,000</u>

	Years Ended June 30,		
	2003	2004	2005
<b>Reserve for Obsolescence and Excess Inventories:</b>			
Balance at beginning of year	\$ 202,000	\$ 950,000	\$ 1,203,000
Additions charged to income	748,000	253,000	9,000
Reductions(1)	—	—	(39,000)
Balance at end of year	<u>\$ 950,000</u>	<u>\$ 1,203,000</u>	<u>\$ 1,173,000</u>

(1) Reflects the elimination of reserve upon the sale of the related inventories.

BYLAWS  
OF  
AASTROM BIOSCIENCES, INC.

BYLAWS  
OF  
AASTROM BIOSCIENCES, INC.

ARTICLE I GENERAL

Section I.1 The name, location of principal office, and purposes of the Corporation shall be as set forth in the Articles of Incorporation. The powers of the Corporation and of its directors and shareholders, and all matters concerning the conduct and regulation of the business of the Corporation, shall be subject to such provisions in regard thereto, if any, as are set forth in said Articles of Incorporation.

Section I.2 All references in these Bylaws to the Articles of Incorporation shall be construed to mean the Articles of Incorporation of the Corporation as amended from time to time.

Section I.3 The registered office of the Corporation may be the same as the principal office of the Corporation, but in any event must be located in the State of Michigan, and must be the business office of the registered agent, as required by the Michigan Business Corporation Act (the "MBCA"). The Corporation may have business offices at such other places, either within or without the State of Michigan, as the Board of Directors may designate or as the business of the Corporation may require from time to time.

ARTICLE II SHAREHOLDERS

Section II.1 Annual Meeting. The annual meeting of the shareholders of the Corporation shall be held at the principal office of the Corporation, or at such other place as may be set forth in the notice thereof, in August or September of each year, at a date and time as designated by the Board of Directors, for the purpose of election of Directors to succeed those whose terms expire and for the transaction of such other business as may properly come before the meeting. The Board of Directors, for good and sufficient reasons, may schedule the annual meeting at any other time, and notice shall be given or waived as provided in Section 2.4 hereof.

Section II.2 Special Meetings. Special Meetings of the shareholders (or of any specific class thereof), for any purpose or purposes, unless otherwise prescribed by statute or by the Articles of Incorporation, may be called by the President and shall be called by the President or Secretary at the request in writing of a majority of the Board of Directors, or at the request in writing of a shareholder or shareholders owning at least ten percent (10%) of the number of shares of stock (or, with respect to meetings of a specific class, the number of shares of such specific class thereof) of the Corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting. Upon the closing of the first sale of the Corporation's common stock pursuant to a firmly underwritten registered public offering (the "IPO"), special meetings of the shareholders may be called only by the President and shall be called by the President at the request in writing of a majority of the Directors then in office, and shall be held at such place, on such date, and at such time as the President or shall fix. Business transacted at special meetings shall be confined to the purpose or purposes stated in the notice.

Section II.3 List of Shareholders. The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of shareholders, a complete list of the shareholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each shareholder and the number of shares registered in the name of each shareholder. Such list shall be open to the examination of any shareholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any shareholder who is present.

Section II.4 Notice of Meetings. Written notice of the time, place and purposes of the meeting of shareholders shall be given not less than 10 nor more than 60 days before the date fixed for such meeting to each shareholder of record entitled to vote at the meeting. Notice shall be deemed duly served when the same has been personally delivered or deposited in the United States Mail, with postage fully prepaid, addressed to the shareholder at such shareholder's address as it appears on the records of the Corporation. Written notice may also be given by facsimile or telegram, and such notice shall be deemed to be given when the recipient receives the notice personally, or when confirmation of transmission of the notice to the shareholder's address as it appears on the books and records of the Corporation has been delivered to the Corporation or to the equipment transmitting such notice. Such notice shall be given by or under the direction of the Secretary of the Corporation, and in the absence or refusal of the Secretary to give such notice, notice shall be given by or under the direction of any other officer of the Corporation. No notice need be given of an adjourned meeting of the shareholders provided the time and place to which such meeting is adjourned is announced at the meeting at which the adjournment is taken and at the adjourned meeting only such business is transacted as might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each shareholder of record entitled to vote at the meeting. A waiver of such notice in writing, signed by a person entitled to said notice, whether before or after the time of the meeting, shall be deemed equivalent to said notice. Attendance of a person at a meeting of shareholders, in person or by proxy, shall constitute a waiver of such notice, except when the attendance is for the express and sole purpose of objecting to the transaction of any business, clearly stated at the commencement of the meeting, by reason of a claim that a meeting was not lawfully called or convened.

Section II.5 Transaction of Business. At an annual or special meeting of the shareholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before a meeting, business must be (a) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the Secretary or other officer of the Corporation, (b) properly brought before the meeting by or at the direction of the Board of Directors, (c) properly brought before an annual meeting by a shareholder, or (d) properly brought before a special meeting by a shareholder, but if, and only if, the notice of a special meeting provides for business to be brought before the meeting by shareholders.

For business to be properly brought before a meeting by a shareholder, the shareholder must have given timely notice thereof in writing to the Secretary of the Corporation. To be timely, a shareholder proposal to be presented at an annual meeting shall be received at the Corporation's principal executive offices not less than 120 calendar days in advance of the date that the Corporation's (or the Corporation's predecessor's) proxy statement was released to shareholders in connection with the previous year's annual meeting of shareholders, except that if no annual meeting was held in the previous year or the date of the annual meeting has been changed by more than 30 calendar days from the date contemplated at the time of the previous year's proxy statement, or in the event of a special meeting, notice by the shareholder to be timely must be received not later than the close of business on the tenth day following the day on which such notice of the date of the meeting was mailed or such public disclosure was made. A shareholder's notice to the Secretary shall set forth as to each matter the shareholder proposes to bring before the annual or special meeting (a) a brief description of the business desired to be brought before the annual or special meeting and the reasons for conducting such business at the special meeting, (b) the name and address, as they appear on the Corporation's books, of the shareholder proposing such business, (c) the class and number of shares of the Corporation which are beneficially owned by the shareholder, and (d) any material interest of the shareholder in such business.

Section II.6 Quorum. The holders of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the shareholders (or any specific class thereof) for the transaction of business except as otherwise provided by statute or by the Articles of Incorporation. If, however, such quorum shall not be present or represented by any meeting of the shareholders, the chairman of the meeting or the holders of a majority of shares of stock entitled to vote thereat who are present, in person or represented by proxy, shall have the power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present or represented.

Section II.7 Voting and Record Date. In order that the Corporation may determine the shareholders entitled to notice of or to vote at any meeting of shareholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be (i) more than sixty (60) nor less than ten (10) days before the date of such meeting, nor (ii) more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the Board of Directors for action by shareholder consent in writing without a meeting, nor (iii) more than sixty (60) days prior to any other action. If a record date is not fixed (a) the record date for determination of shareholders entitled to vote at a meeting of shareholders shall be the close of business on the day next preceding the day on which notice of such meeting is given, and (b) the record date for determining shareholders for any purpose other than that specified in subdivision (a) shall be the close of business on the day on which the resolution of the Board relating thereto is adopted. When a determination of shareholders of record entitled to vote at a meeting of shareholders has been made as provided in this Section, the determination applies to any adjournment of the meeting, unless the Board fixes a new record date under this Section for the adjourned meeting.

Section II.8 Proxies. A proxy, given by a shareholder to another person, authorizing such other person to vote the shares of such shareholder, shall be in writing and signed by the shareholder or his authorized agent or representative. A proxy shall not be valid after the expiration of three (3) years from its date unless otherwise provided therein. All proxies shall be filed with the Secretary at or before the meeting at which they are intended to be used. A proxy shall be deemed sufficient if it appears on its face to confer the requisite authority and is signed by the owner of the stock to be voted. No witnesses to the execution of any proxy shall be required.

Section II.9 Inspectors. The Board of Directors, in advance of a shareholders meeting, may appoint one or more inspectors to act at the meeting or any adjournment thereof. If inspectors are not so appointed, the person presiding at a shareholders meeting may, and on request of a shareholder entitled to vote thereat shall, appoint one or more inspectors. In case a person appointed fails to appear or act, the vacancy may be filled by appointment made by the Board of Directors in advance of the meeting or at the meeting by the person presiding thereat. The inspectors shall determine the number of shares outstanding and the voting power of each, the shares represented at the meeting, the existence of a quorum, the validity and effect of proxies, and shall receive votes, ballots or consents, hear and determine challenges and questions arising in connection with the right to vote, count and tabulate votes, ballots or consents, determine the result, and do such acts as are proper to conduct the election or vote with fairness to all shareholders. On request of the person presiding at the meeting or a shareholder entitled to vote thereat, the inspectors shall make and execute a written report to the person presiding at the meeting of any of the facts found by them and matters determined by them. The report shall be prima facie evidence of the facts stated and of the vote as certified.

Section II.10 Action by Written Consent. The shareholders of the Corporation shall have the ability to take action without a meeting only as provided in the Articles of Incorporation.

Section II.11 Voting of Shares by Certain Holders.

(a) Voting by Trustee or Fiduciary. Shares standing in the name of any person as trustee or other fiduciary may be voted and all rights incident thereto may be exercised only by the trustee or other fiduciary, in person or by proxy, and without proof of authority.

(b) Voting of Pledged Stock. Unless the Corporation has specific written instructions to the contrary, from the pledgee and pledgor, pledged stock may be voted by the pledgor only.

(c) Voting by Guardian of Incompetent. Shares standing in the name of a person adjudged incompetent may be voted and all rights incident thereto may be exercised only by his guardian, in person or by proxy.

(d) Voting by Executor or Administrator. Shares standing in the name of a deceased person may be voted and all rights incident thereto may be exercised only by his executor or administrator, in person or by proxy.

(e) Voting by Guardian of Minor. Shares standing in the name of a minor may be voted and all rights incident thereto may be exercised by his guardian, in person or by proxy, or in the absence of such representation by his guardian, by the minor, in person or by proxy, whether or not the Corporation has notice, actual or constructive, of the nonage or the appointment of a guardian, and whether or not a guardian has been in fact appointed.

(f) Voting of Shares in Name of Corporation. Shares standing in the name of a corporation, domestic or foreign, may be voted or represented and all rights incident thereto may be exercised on behalf of that corporation by the persons described in any of the following subdivisions:

(1) Any officer of the Corporation authorized so to do by the Bylaws of that Corporation.

(2) Any person authorized so to do by resolution of the Board of Directors or a duly authorized committee of the Board of Directors of that Corporation.

(3) Any person authorized so to do by proxy or power of attorney duly executed by the President or Vice President and Secretary or Assistant Secretary of that Corporation.

However, such shares may be voted or represented by the persons described in any subdivision only in the absence of vote or representation by the persons described in a preceding subdivision of this subparagraph.

(g) Voting Shares in Names of Two or More Persons. Shares standing in the names of two or more persons shall be voted or represented in accordance with the vote or consent of the majority of the persons in whose names the shares stand. If only one such person is present in person or by proxy, he may vote all the shares, and all the shares standing in the names of such persons are represented for the purpose of determining a quorum. This applies to the voting of shares by two or more administrators, executors, trustees, or other fiduciaries, unless the instrument or order of court appointing them otherwise directs.

### ARTICLE III BOARD OF DIRECTORS

Section III.1 General Powers. The property, affairs and business of the Corporation shall be managed by the Board of Directors.

Section III.2 Number, Qualification and Term of Office. Unless otherwise provided in the Articles of Incorporation, the Board of Directors shall be divided into three classes, as nearly equal in numbers as the then total number of directors constituting the entire Board of Directors permits, with the term of office of one class expiring each year.

The term of office of directors in the first class shall expire at the first annual meeting of shareholders after their election, the term of office of directors in the second class shall expire at the second annual meeting of shareholders after their election, and the term of office of directors in the third class shall expire at the third annual meeting of shareholders after their election. The directors elected at the 1994 Annual Shareholders Meeting will be classified into terms of one, two or three years, by resolution of the Board of Directors. At each annual meeting of shareholders after such classification of the Board of Directors, a number of directors equal to the number of the class whose term expires at the meeting shall be elected to hold office until the third succeeding annual meeting. Directors shall hold office until the next election of the class for which such directors shall have been chosen and until their successors are elected and qualified, except in the case of the death, resignation or removal of any Director. Directors need not be shareholders of the Corporation. The size of the Board of Directors shall be within the range of five to nine directors, with the exact size to be fixed from time to time by resolution of the Board of Directors.

Section III.3 Vacancies. The shareholders may, at any meeting called for such purpose, by a vote of a majority of the capital stock issued and outstanding and entitled to vote thereon, remove any Director from office, with or without cause. Any Director may resign by written notice to the President, such resignation to be effective upon its receipt by the President or at such subsequent time as may be specified in the notice of resignation. Subject to the rights of the holders of any series of Preferred Stock then outstanding, newly created directorships resulting from any increase in the authorized number of Directors or any vacancies in the Board of Directors resulting from death, resignation, retirement, disqualification or other cause may be filled only by a majority vote of the directors then in office, though less than a quorum, and Directors so chosen shall hold office for a term expiring at the next annual meeting of shareholders at which the term of office of the class to which they have been elected expires, except in the case of death, resignation or removal of any Director. No decrease in the number of Directors constituting the Board of Directors shall shorten the term of any incumbent Director. Acceptance of resignation shall not be necessary for it to be effective.

Section III.4 Meetings of the Board of Directors. The Board of Directors shall hold an annual meeting immediately following the annual shareholders meeting, for the purpose of electing officers and for the transaction of such other business as may properly come before the meeting. No notice of such annual meeting shall be necessary to the newly elected directors in order legally to constitute the meeting, provided a quorum shall be present, unless said meeting is held, by a consent of a majority of the Directors of such new Board, at a time and place other than at the place of holding and immediately following the annual meeting of shareholders. Special meetings of the Board of Directors may be held at any place either within or without the State of Michigan at any time pursuant to resolution adopted by the Board of Directors or upon call of the President or any two (2) officers.

Section III.5 Notice of Meetings. Notice of meetings of Directors shall be given or waived in the same manner as notice of meetings of shareholders, as provided in Section 2.4, except that notice of Directors meetings shall be given not later than two (2) nor more than ten (10) days prior to such meetings.

Section III.6 Quorum and Required Vote of Board. A majority of the total number of Directors shall constitute a quorum for the transaction of business, and the act of a majority of the Directors present at any meeting at which a quorum is present shall be the act of the Board of Directors. Amendment of these Bylaws by the Board requires the vote of not less than a majority of the members of the Board then in office.

Section III.7 Telephonic Meetings. A member of the Board or of a committee designated by the Board may participate in a meeting by means of conference telephone or similar communications equipment by which all persons participating in the discussion can hear each other. Participation in a meeting pursuant to this provision constitutes presence in person at the meeting.

Section III.8 Board Action Without Meeting. If all of the Directors then constituting the Board of Directors of the Corporation or of any committee of the Board of Directors shall severally and/or collectively consent in writing to any action to be taken, such action shall have the same effect as though it had been authorized at a duly called and properly held meeting of the Board of Directors or such committee. Such written consent shall be filed with the minutes of the proceedings of the Board.

Section III.9 Committees. The Board of Directors may, by resolution or resolutions, passed by a majority of the whole Board of Directors, designate one or more committees, each committee to consist of one (1) or more of the Directors of the Corporation, which, to the extent provided in said resolution or resolutions or in other provisions of these Bylaws, shall have and may exercise the powers of the Board of Directors in the management of the business and affairs of the Corporation, and may have the power to authorize the seal of the Corporation to be affixed to all papers which may require it.

Section III.10 Compensation. By resolution of the Board of Directors, the Directors may be paid their expenses, if any, of attendance at each meeting of the Board, and may be paid a fixed sum for attendance. No such payment shall preclude any Director from serving the Corporation in any other capacity and receiving compensation therefor. Members of the committees shall be allowed similar compensation for attending committee meetings.

Section III.11 Presumption of Assent. A Director of the Corporation who is present at a meeting of the Board at which action on any corporate matter is taken shall be presumed to have assented to the action taken unless his dissent shall be entered in the minutes of the meeting or unless he shall file his written dissent to such action with the person acting as Secretary of the meeting before the adjournment thereof, or by registered mail to such Secretary immediately after the adjournment thereof. This shall not apply to a Director who voted in favor of such action.

#### ARTICLE IV OFFICERS AND AGENTS

Section IV.1 General. The Corporation shall have a President, a Secretary, and a Treasurer, and, if desired, a Chairman of the Board and one or more Vice Presidents, Assistant Secretaries and Assistant Treasurers. All officers of the Corporation shall be elected by the Directors and shall hold office until their successors are elected and qualified.

The Corporation may also have such other officers, agents and factors as may be deemed necessary for the transaction of the business of the Corporation, who shall be chosen in such manner and hold their offices for such terms and have such authority and duties as may be determined by the Board of Directors. The Board of Directors may secure the fidelity of any and/or all of such officers by bond or otherwise and may also provide for the qualification of any or all of such officers before any person authorized by law to administer an oath. The Board of Directors, by resolution, may require any or all of the officers of the Corporation to give bonds, in favor of the Corporation, with sufficient surety or sureties, and in such amounts as the Board of Directors may fix, conditioned on the faithful performance of the duties of their respective offices. The President shall be chosen from among the Directors. Any two offices except those of President and Vice President may be held by the same person but no officer shall execute, acknowledge or verify any instrument in more than one capacity. Subject to these Bylaws, each officer shall have in addition to the duties and powers herein set forth, such duties and powers as are commonly incident to his office, and such duties and powers as the Board of Directors shall from time to time designate. In all cases where the duties of any officer, agent or employee are not specifically prescribed by the Bylaws or by the Board of Directors, such officer, agent or employee shall obey the orders and instructions of the President. Compensation of the officers shall be as authorized by the Board of Directors.

Section IV.2 Duties of the President. The President shall, subject to the direction and under the supervision of the Board of Directors, be the chief executive officer of the Corporation and shall have general and active control of its affairs and business and general supervision over its officers, agents and employees. The President shall also appoint and discharge all subordinate agents and employees and fix their salaries, subject to review by the Board of Directors, and shall designate their duties. He shall preside at all meetings of the shareholders and, unless a Chairman of the Board has been elected, at all meetings of the Board of Directors, at which he is present. The President shall have custody of the Treasurer's bond, if any.

Section IV.3 Duties of the Chairman of the Board. The Board of Directors may elect or appoint a Chairman of the Board. The Chairman of the Board shall, if present, preside at all meetings of the Board of Directors and shall exercise and perform such other powers and duties as may be assigned to him from time to time by the Board of Directors or prescribed by these Bylaws.

Section IV.4 Duties of the Vice President. The Board of Directors may elect or appoint one or more Vice Presidents. The Vice Presidents, if such be elected, shall, subject to the direction and under the supervision of the President, be the assistant chief executive officer of the Corporation and shall assist the President in the general and active control of its affairs in business. The Vice Presidents shall perform all the duties of the President in case of the absence or disqualification of the President. Any of such Vice Presidents shall preside at all meetings of the shareholders in the absence or unavailability of the President.

Section IV.5 Duties of the Secretary. The Secretary shall: (a) keep the minutes of the proceedings of the shareholders and of the Board of Directors in one or more books provided for that purpose; (b) see that all notices are duly given in accordance with the provisions of these Bylaws or as required by law; (c) be custodian of the corporate records and of the seal of the Corporation and ensure that the seal of the Corporation is affixed to all documents the execution of which on behalf of the Corporation under its seal is duly authorized; (d) keep a register of the post office address of each shareholder which shall be furnished to the Secretary by such shareholder; and (e) perform all duties incident to the office of secretary and such other duties as from time to time may be assigned to him by the President or by the Board of Directors. The Secretary also shall have charge of the stock ledger (which may, however, be kept by any transfer agent or agents of the Corporation under the direction of the Secretary), the original or duplicate of which shall, at all times, during the usual hours for business, be open to the examination of every shareholder at the principal office or place of business of the Corporation in Michigan. In the absence of the Secretary from any meeting, a temporary Secretary shall be chosen, who shall be sworn to the faithful discharge of his duty and shall record the proceedings of such meeting in the aforesaid books.

Section IV.6 Duties of the Treasurer. The Treasurer shall, subject to the direction and under the supervision of the Board of Directors, the President and the Vice President, have the care and custody of the funds and valuable papers of the Corporation, except his own bond, and he shall have power to endorse for deposit or collection all notes, checks, drafts and other obligations for the payment of money to the Corporation or its order. He shall keep, or cause to be kept, at the principal office of the Corporation accurate books of account, which shall be the property of the Corporation. He shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the President and Directors, when they so direct, an account of all his transactions as Treasurer and of the financial condition of the Corporation.

Section IV.7 Assistant Secretaries and Assistant Treasurers. The Assistant Secretary or Assistant Secretaries, in the absence or disability of the Secretary, shall perform the duties and exercise the powers of the Secretary. The Assistant Treasurer or Assistant Treasurers, in the absence or disability of the Treasurer, shall perform the duties and exercise the powers of the Treasurer. Any Assistant Treasurer, if required by the Board, shall keep in force a bond as provided in Section 4.1. The Assistant Secretaries and Assistant Treasurers, in general, shall exercise and perform such other powers and duties as shall be assigned to them by the Secretary or by the Treasurer, respectively, or by the Board of Directors or the President.

Section IV.8 Vacancies. The Board of Directors may, at any meeting called for the purpose, by vote of a majority of their number, remove from office any officer of the Corporation, with or without cause. Any officer may resign by written notice to the President, which resignation may be effective upon its receipt by the President or at such subsequent time as may be specified in the notice of resignation, PROVIDED, HOWEVER, that the resignation of the President shall be submitted to the Board of Directors. The Board of Directors may, at any meeting, accept the resignation of any officer or remove or accept the resignation of any agent or member of a committee, and may fill such vacancy for the unexpired term and until the successor thereof shall be duly elected and qualified. Acceptance of resignation shall not be necessary for it to be effective.

## ARTICLE V CAPITAL STOCK

Section V.1 Issuance. The shares of capital stock of the Corporation shall be issued by the Board of Directors in such amounts, at such times, for such consideration, and on such terms and conditions as the Board shall deem advisable, subject to the provisions of the Articles of Incorporation of the Corporation and the further provisions of these Bylaws.

Section V.2 Stock Certificates. The shares of the capital stock of the Corporation shall be represented by certificates signed and sealed in accordance with the provisions of the laws of the State of Michigan. Certificates shall have a form and content complying with the laws of the State of Michigan and approved by the Board of Directors of the Corporation. Certificates of stock shall bear the signature of the President, and shall be signed by the Secretary, Assistant Secretary, or any other officer appointed by the Board of Directors for the purpose, to be known as an Authorized Officer. The signatures of the officers may be facsimiles if the certificate is countersigned by a transfer agent or registered by a registrar other than the Corporation itself or its employee. In case an officer who has signed or whose facsimile signature has been placed upon a certificate ceases to be such officer before the certificate is issued, it may be issued by the Corporation with the same effect as if he were such officer at the date of issue. Each certificate shall recite on its face the stock represented thereby is transferable only upon the books of the Corporation properly endorsed. A certificate representing shares issued by a corporation which is authorized to issue shares of more than one class shall set forth on its face or back or state that the Corporation will furnish to a shareholder upon request and without charge a full statement of the designation, relative rights, preferences and limitations of the shares of each class authorized to be issued, and if the Corporation is authorized to issue any class of shares in series, the designation, relative rights, preferences and limitations of each series so far as the same have been prescribed and the authority of the Board to designate and prescribe the relative rights, preferences and limitations of other series.

Section V.3 Transfers. Upon surrender to the Corporation or the transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the Corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

Section V.4 Ownership. The Corporation shall be entitled to treat the person in whose name any share of stock is registered as the owner thereof for purposes of dividends and other distributions in the course of business, or in the case of recapitalization, consolidation, merger, reorganization, sale of assets, liquidation or otherwise and for the purpose of votes, approvals and consents by shareholders, and for the purpose of notice to shareholders, and for all other purposes whatever, and shall not be bound to recognize any equitable or other claim to or interest in such shares on the part of any other person, whether or not the Corporation shall have notice thereof, save as expressly required by the laws of the State of Michigan.

Section V.5 Replacement of Certificates. Upon the presentation to the Corporation of a proper affidavit attesting the loss, destruction or mutilation of any certificate for shares of stock of the Corporation, the Board of Directors may direct the issuance of a new certificate in lieu of and to replace the certificate so alleged to be lost, destroyed and mutilated. The Board of Directors may require as a condition precedent to the issuance of a new certificate any or all of the following, to wit: (a) Additional evidence of the loss, destruction or mutilation claimed; (b) Advertisement of the loss in such manner as the Board of Directors may direct or approve; (c) A bond or agreement of indemnity, in such form and amount and with such surety (or without surety) as the Board of Directors may direct or approve; or (d) The order or approval of a court.

Section V.6 Transfer Agent and Registrar. The Board of Directors may appoint a transfer agent and a registrar for the registration of transfers of its securities.

Section V.7 Regulations. The Board of Directors shall have power and authority to make all such rules and regulations as the Board shall deem expedient regulating the issue, transfer and registration of certificates for shares of this Corporation.

Section V.8 Dividends. The Board of Directors, in its discretion from time to time, may declare dividends upon the capital stock from the surplus of the Corporation as permitted by the MBCA, subject to the Articles of Incorporation.

Section V.9 Reserves. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for such other purpose as the Directors shall think conducive to the interest of the Corporation, and the Directors may modify or abolish any such reserve in the manner in which it was created.

#### ARTICLE VI INDEMNIFICATION OF OFFICERS, DIRECTORS, EMPLOYEES AND AGENTS

Section VI.1 Indemnification of Directors and Officers: Claims by Third Parties. The Corporation shall, to the fullest extent authorized or permitted by the MBCA or other applicable law, as the same presently exists or may hereafter be amended, indemnify a director or officer (the "Indemnitee") who was or is a party or is threatened to be made a party to a threatened, pending, or completed action, suit, or proceeding, whether civil, criminal, administrative, or investigative and whether formal or informal, other than an action by or in the right of the Corporation, by reason of the fact that he or she is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, partner, trustee, employee, or agent of another foreign or domestic corporation, partnership, joint venture, trust, or other enterprise, whether for profit or not, against expenses, including attorneys' fees, judgments, penalties, fines, and amounts paid in settlement actually and reasonably incurred by him or her in connection with the action, suit, or proceeding, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Corporation or its shareholders, and with respect to a criminal action or proceeding, if the Indemnitee had no reasonable cause to believe his or her conduct was unlawful. The termination of an action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, does not, of itself, create a presumption that the Indemnitee did not act in good faith and in a manner which he or she reasonably believed to be in or not opposed to the best interests of the Corporation or its shareholders, and, with respect to a criminal action or proceeding, had reasonable cause to believe that his or her conduct was unlawful.

Section VI.2 Indemnification of Directors and Officers: Claims Brought By or In the Right of the Corporation. The Corporation shall, to the fullest extent authorized or permitted by the MBCA or other applicable law, as the same presently exists or may hereafter be amended, indemnify a director or officer (the "Indemnitee") who was or is a party to or is threatened to be made a party to a threatened, pending, or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that he or she is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, partner, trustee, employee, or agent of another foreign or domestic corporation, partnership, joint venture, trust, or other enterprise, whether for profit or not, against expenses, including actual and reasonable attorneys' fees, and amounts paid in settlement incurred by the person in connection with the action or suit, if the Indemnitee acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the Corporation or its shareholders. However, indemnification under this Section shall not be made for a claim, issue, or matter in which the Indemnitee has been found liable to the Corporation unless and only to the extent that the court in which the action or suit was brought has determined upon application that, despite the adjudication of liability but in view of all circumstances of the case, the Indemnitee is fairly and reasonably entitled to indemnification for the expenses which the court considers proper.

Section VI.3 Actions by the Indemnitee. Notwithstanding the provisions of Sections 6.1 and 6.2, the Corporation shall not indemnify an Indemnitee in connection with any action, suit, proceeding or claim (or part thereof) brought or made by such Indemnitee; unless such action, suit, proceeding or claim (or part thereof) (i) was authorized by the Board of Directors of the Corporation, or (ii) was brought or made to enforce this Article and such Indemnitee has been successful in such action, suit, proceeding or claim (or part thereof).

Section VI.4 Approval of Indemnification. An indemnification under Sections 6.1 or 6.2 hereof, unless ordered by a court, shall be made by the Corporation only as authorized in the specific case upon its determination that indemnification of the Indemnitee is proper in the circumstances because such Indemnitee has met the applicable standard of conduct set forth in Sections 6.1 and 6.2. This determination shall be made in any of the following ways:

(a) By a majority vote of a quorum of the Board consisting of Directors who were not parties to the action, suit, or proceeding.

(b) If the quorum described in subdivision (a) is not obtainable, then by a majority vote of its committee of Directors who are not parties to the action. The committee shall consist of not less than two (2) disinterested Directors.

(c) By independent legal counsel in a written opinion.

(d) By the shareholders.

Section VI.5 Advancement of Expenses. Expenses incurred in defending a civil or criminal action, suit, or proceeding described in Section 6.1 or 6.2 above shall be paid by the Corporation in advance of the final disposition of the action, suit, or proceeding upon receipt of an undertaking by or on behalf of the Indemnitee to repay the expenses if it is ultimately determined that the Indemnitee is not entitled to be indemnified by the Corporation. The undertaking shall be by unlimited general obligation of the person on whose behalf advances are made but need not be secured.

Section VI.6 Partial Indemnification. If an Indemnitee is entitled to indemnification under Section 6.1 or 6.2 for a portion of expenses including attorneys' fees, judgments, penalties, fines, and amounts paid in settlement, but not for the total amount thereof, the Corporation shall indemnify the Indemnitee for the portion of the expenses, judgments, penalties, fines, or amounts paid in settlement for which the Indemnitee is entitled to be indemnified.

Section VI.7 Indemnification of Employees and Agents. Any person who is not covered by the foregoing provisions of this Article and who is or was an employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, may be indemnified to the fullest extent authorized or permitted by the MBCA or other applicable law, as the same exists or may hereafter be amended, but in the case of any such amendment, only to the extent such amendment permits the Corporation to provide broader indemnification rights than before such amendment, but in any event only to the extent authorized at any time or from time to time by the Board of Directors.

Section VI.8 Other Rights of Indemnification. The indemnification or advancement of expenses provided under Sections 6.1 to 6.7 is not exclusive of other rights to which a person seeking indemnification or advancement of expenses may be entitled under the Articles of Incorporation, Bylaws, or a contractual agreement. However, the total amount of expenses advanced or indemnified from all sources combined shall not exceed the amount of actual expenses incurred by the person seeking indemnification or advancement of expenses. The indemnification provided for in Sections 6.1 to 6.7 continues as to a person who ceases to be a director, officer, employee, or agent and shall inure to the benefit of the heirs, executors, and administrators of the person.

Section VI.9 Definitions. "Other enterprises" shall include employee benefit plans; "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and "serving at the request of the corporation" shall include any service as a director, officer, employee, or agent of the corporation which imposes duties on, or involves services by, the director, officer, employee, or agent with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner he or she reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be considered to have acted in a manner "not opposed to the best interests of the corporation or its shareholders" as referred to in Sections 6.1 and 6.2.

Section VI.10 Application to a Resulting or Surviving Corporation or Constituent Corporation. The definition for "corporation" found in Section 569 of the MBCA, as the same exists or may hereafter be amended, is and shall be, specifically excluded from application to this Article. The indemnification and other obligations of the Corporation set forth in this Article shall be binding upon any resulting or surviving corporation after any merger or consolidation of the Corporation. Notwithstanding anything to the contrary contained herein or in Section 569 of the MBCA, no person shall be entitled to the indemnification and other rights set forth in this Article for acting as a director or officer of another corporation prior to such other corporation entering into a merger or consolidation with the Corporation.

Section VI.11 Contract With the Corporation. The right to indemnification conferred in this Article VI shall be deemed to be a contract between the Corporation and each director or officer who serves in any such capacity at any time while this Article VI is in effect, and any repeal or modification of any such law or of this Article VI shall not affect any rights or obligations then existing with respect to any state of facts then or theretofore existing or any action, suit or proceeding theretofore or thereafter brought or threatened based in whole or in part upon any such state of facts. In the event this Article is repealed or modified, the Corporation shall give written notice thereof to the directors and officers and any such repeal or modification shall not be effective for a period of sixty (60) days after such notice is delivered.

Section VI.12 Liability Insurance. The Corporation shall have the power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise against any liability asserted against and incurred by such person in any such capacity or arising out of such person's status as such, regardless of whether the Corporation would have the power to indemnify such person against such liability under the provisions of the MBCA.

Section VI.13 Severability. Each and every paragraph, sentence, term and provision of this Article VI shall be considered severable in that, in the event a court finds any paragraph, sentence, term or provision to be invalid or unenforceable, the validity and enforceability, operation, or effect of the remaining paragraphs, sentences, terms, or provisions shall not be affected, and this Article VI shall be construed in all respects as if the invalid or unenforceable matter had been omitted.

Section VI.14 Enforcement. If a claim under this Article is not paid in full by the Corporation within thirty days after a written claim has been received by the Corporation, the claimant may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim, and, if successful in whole or in part, the claimant shall be entitled to be paid also the expense of prosecuting such claim. It shall be a defense to any such action (other than an action brought to enforce a claim for expenses incurred in defending any proceeding in advance of its final disposition where the required undertaking, if any is required, has been tendered to the Corporation) that the claimant has not met the standards of conduct which make it permissible under the MBCA for the Corporation to indemnify the claimant for the amount claimed, but the burden of proving such defense shall be on the Corporation.

Neither the failure of the Corporation (including its Board of Directors, a committee thereof, independent legal counsel, or its shareholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because such claimant has met the applicable standard of conduct set forth in the MBCA nor an actual determination by the Corporation (including its Board of Directors, a committee thereof, independent legal counsel, or its shareholders) that the claimant has not met applicable standard of conduct, shall be a defense to the action or create a presumption that the claimant has not met the applicable standard of conduct.

#### ARTICLE VII EXECUTION OF PAPERS

The officers of the Corporation may sell any or all of its holdings of stock, bonds, or securities of other corporations, or government securities; sign all deeds, mortgages, assignments of mortgages, discharges of mortgages, bills of sale, leases and other conveyances and transactions of any interest in property, real, personal or mixed, to the extent that the Board of Directors of the Corporation may from time to time specify in resolutions approved by the Board. The Board may in any instance designate the officers and agents who shall have authority to execute any contract, conveyance or other instrument on behalf of the Corporation, and may also ratify and affirm such execution. Any such instrument or document shall be binding on the Corporation if executed by the President or a Vice President. In addition, any such instrument or document shall be binding on the Corporation if signed by any other officer designated by the Board on behalf of the Corporation.

#### ARTICLE VIII BANKING

Section VIII.1 Bank Accounts. The Board of Directors shall by resolution designate the bank or banks in which the funds of the Corporation shall be deposited, and such funds shall be deposited in the name of the Corporation and shall be subject to checks drawn as authorized by resolution of the Board of Directors.

Section VIII.2 Borrowing. To the extent authorized by law, the Corporation may, wherever its general interests and corporate purpose require the same, borrow money and issue its promissory notes, debentures or bonds for the repayment thereof with interest, and may in like case mortgage, pledge or encumber its property as security for its debts or other lawful engagements.

#### ARTICLE IX VOTING STOCK IN OTHER CORPORATIONS

Unless otherwise ordered by the Board of Directors, the President shall have full power and authority on behalf of the Corporation to attend and to act and to vote at any meetings of shareholders of any corporation in which this Corporation may hold stock, and at any such meeting shall possess and may exercise any and all of the rights and powers incident to the ownership of such stock, PROVIDED, HOWEVER, that such rights shall be exercised in the best interests of this Corporation. The Board of Directors may, by resolution, from time to time confer like powers upon any other person or persons, but the same shall not be effective unless actually received by such other corporation prior to the meeting of shareholders in which such other person is to act. The President, or in his absence or disability, a Vice President of the Corporation, may authorize from time to time the signature and issuance of proxies to vote such stock of other corporations owned by this Corporation, and all such proxies shall be signed in the name of this Corporation by the President or Vice President and the Secretary or Assistant Secretary, or by any two officers authorized by the Board of Directors.

ARTICLE X SUBSIDIARIES

The Board of Directors may establish, reorganize and/or dissolve wholly- or partly-owned subsidiaries of the Corporation. The Articles of Incorporation and Bylaws of any such subsidiary shall not, without approval of the shareholders of this Corporation, substantially differ from the Articles of Incorporation and Bylaws, respectively, of this Corporation.

ARTICLE XI FISCAL YEAR

Except as from time to time otherwise provided by the Board of Directors, the fiscal year of the Corporation shall end on the last day of June.

ARTICLE XII CORPORATE BOOKS AND RECORDS

The Corporation shall keep books and records of account and minutes of the proceedings of its shareholders, Board of Directors and executive committees, if any. The books, records and minutes may be kept outside this state. The Corporation shall keep at its registered office, or at the office of its transfer agent within or without this state, records containing the names and addresses of all shareholders, the number, class and series of shares held by each and the dates when they respectively became holders of record thereof. Any of such books, records or minutes may be in written form or in any other form capable of being converted into written form within a reasonable time. The Corporation shall convert into written form without charge any such record not in such form, upon written request of a person entitled to inspect them.

ARTICLE XIII AMENDMENTS

Except as otherwise expressly provided in the Articles of Incorporation or in these Bylaws, these Bylaws may be altered, amended or repealed by any duly adopted resolution of the Board of Directors or at any annual or special meeting of the shareholders. If the amendment is to be adopted at a special meeting of the shareholders, the notice thereof shall specify the subject matter of the proposed alteration, amendment or repeal and the Articles of these Bylaws to be affected thereby. Bylaws adopted by the Directors may be altered or repealed by the Directors or shareholders. Provided, further, that neither the time nor the place for the election of Directors shall be changed within sixty (60) days next preceding the day on which any election of Directors is to be held, and provided further that a notice of any such change shall be given to each shareholder at least twenty (20) days before the next election is held, in person or by letter mailed to his last known post office address.

ATTEST:

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Alan M. Wright, SECRETARY

Includes amendments approved through May 11, 2005

AASTROM BIOSCIENCES, INC.  
2004 STOCK OPTION AGREEMENT

Aastrom Biosciences, Inc. has granted to the individual (the "OPTIONEE") named in the Notice of Grant of Stock Option (the "NOTICE") to which this Stock Option Agreement (the "OPTION AGREEMENT") is attached an option (the "OPTION") to purchase certain shares of Stock upon the terms and conditions set forth in the Notice and this Option Agreement. The Option has been granted pursuant to and shall in all respects be subject to the terms and conditions of the Aastrom Biosciences, Inc. 2004 Stock Option Plan (the "PLAN"), as amended to the Date of Option Grant, the provisions of which are incorporated herein by reference. By signing the Notice, the Optionee: (a) represents that the Optionee has received copies of, and has read and is familiar with the terms and conditions of, the Notice, the Plan and this Option Agreement, (b) accepts the Option subject to all of the terms and conditions of the Notice, the Plan and this Option Agreement, and (c) agrees to accept as binding, conclusive and final all decisions or interpretations of the Board upon any questions arising under the Notice, the Plan or this Option Agreement.

1. DEFINITIONS AND CONSTRUCTION.

1.1 DEFINITIONS. Unless otherwise defined herein, capitalized terms shall have the meanings assigned to such terms in the Notice or the Plan.

1.2 CONSTRUCTION. Captions and titles contained herein are for convenience only and shall not affect the meaning or interpretation of any provision of this Option Agreement. Except when otherwise indicated by the context, the singular shall include the plural and the plural shall include the singular. Use of the term "or" is not intended to be exclusive, unless the context clearly requires otherwise.

2. TAX CONSEQUENCES.

2.1 TAX STATUS OF OPTION. This Option is intended to have the tax status designated in the Notice.

(a) INCENTIVE STOCK OPTION. If the Notice so designates, this Option is intended to be an Incentive Stock Option within the meaning of Section 422(b) of the Code, but the Company does not represent or warrant that this Option qualifies as such. The Optionee should consult with the Optionee's own tax advisor regarding the tax effects of this Option and the requirements necessary to obtain favorable income tax treatment under Section 422 of the Code, including, but not limited to, holding period requirements. (NOTE TO OPTIONEE: If the Option is exercised more than three (3) months after the date on which you cease to be an Employee (other than by reason of your death or permanent and total disability as defined in Section 22(e)(3) of the Code), the Option will be treated as a Nonstatutory Stock Option and not as an Incentive Stock Option to the extent required by Section 422 of the Code.)

(b) NONSTATUTORY STOCK OPTION. If the Notice so designates, this Option is intended to be a Nonstatutory Stock Option and shall not be treated as an Incentive Stock Option within the meaning of Section 422(b) of the Code.

2.2 ISO FAIR MARKET VALUE LIMITATION. If the Notice designates this Option as an Incentive Stock Option, then to the extent that the Option (together with all Incentive Stock Options granted to the Optionee under all stock option plans of the Participating Company Group, including the Plan) becomes exercisable for the first time during any calendar year for shares having a Fair Market Value greater than One Hundred Thousand Dollars (\$100,000), the portion of such options which exceeds such amount will be treated as Nonstatutory Stock Options. For purposes of this Section 2.2, options designated as Incentive Stock Options are taken into account in the order in which they were granted, and the Fair Market Value of stock is determined as of the time the option with respect to such stock is granted. If the Code is amended to provide for a different limitation from that set forth in this Section 2.2, such different limitation shall be deemed incorporated herein effective as of the date required or permitted by such amendment to the Code. If the Option is treated as an Incentive Stock Option in part and as a Nonstatutory Stock Option in part by reason of the limitation set forth in this Section 2.2, the Optionee may designate which portion of such Option the Optionee is exercising. In the absence of such designation, the Optionee shall be deemed to have exercised the Incentive Stock Option portion of the Option first. Separate certificates representing each such portion shall be issued upon the exercise of the Option. (NOTE TO OPTIONEE: If the aggregate Exercise Price of the Option (that is, the Exercise Price multiplied by the Number of Option Shares) plus the aggregate exercise price of any other Incentive Stock Options you hold (whether granted pursuant to the Plan or any other stock option plan of the Participating Company Group) is greater than \$100,000, you should contact the Chief Financial Officer of the Company to ascertain whether the entire Option qualifies as an Incentive Stock Option.)

### 3. ADMINISTRATION.

All questions of interpretation concerning this Option Agreement shall be determined by the Board. All determinations by the Board shall be final and binding upon all persons having an interest in the Option. Any Officer shall have the authority to act on behalf of the Company with respect to any matter, right, obligation, or election which is the responsibility of or which is allocated to the Company herein, provided the Officer has apparent authority with respect to such matter, right, obligation, or election.

### 4. EXERCISE OF THE OPTION.

4.1 RIGHT TO EXERCISE. Except as otherwise provided herein, the Option shall be exercisable on and after the Initial Vesting Date and prior to the termination of the Option (as provided in Section 6) in an amount not to exceed the number of Vested Shares less the number of shares previously acquired upon exercise of the Option. In no event shall the Option be exercisable for more shares than the Number of Option Shares.

4.2 METHOD OF EXERCISE. Exercise of the Option shall be by written notice to the Company which must state the election to exercise the Option, the number of whole shares of

Stock for which the Option is being exercised and such other representations and agreements as to the Optionee's investment intent with respect to such shares as may be required pursuant to the provisions of this Option Agreement. The written notice must be signed by the Optionee and must be delivered in person, by certified or registered mail, return receipt requested, by confirmed facsimile transmission, or by such other means as the Company may permit, to the Chief Financial Officer of the Company, or other authorized representative of the Participating Company Group, prior to the termination of the Option as set forth in Section 6, accompanied by full payment of the aggregate Exercise Price for the number of shares of Stock being purchased. The Option shall be deemed to be exercised upon receipt by the Company of such written notice and the aggregate Exercise Price.

#### 4.3 PAYMENT OF EXERCISE PRICE.

(a) FORMS OF CONSIDERATION AUTHORIZED. Except as otherwise provided below, payment of the aggregate Exercise Price for the number of shares of Stock for which the Option is being exercised shall be made (i) in cash, by check or cash equivalent, (ii) by tender to the Company, or attestation to the ownership, of shares of Stock owned by the Optionee having a Fair Market Value not less than the aggregate Exercise Price, (iii) by means of a Cashless Exercise, as defined in Section 4.3(b), or (iv) by any combination thereof.

#### (b) LIMITATIONS ON FORMS OF CONSIDERATION.

(i) TENDER OF STOCK. Notwithstanding the foregoing, an Option may not be exercised by tender to the Company, or attestation to the ownership, of shares of Stock to the extent such tender or attestation would constitute a violation of the provisions of any law, regulation or agreement restricting the redemption of the Company's stock. Unless otherwise provided by the Board, an Option may not be exercised by tender to the Company, or attestation to the ownership, of shares of Stock unless such shares either have been owned by the Optionee for more than six (6) months (and not used for another Option exercise by attestation during such period) or were not acquired, directly or indirectly, from the Company.

(ii) CASHLESS EXERCISE. A "CASHLESS EXERCISE" means the delivery of a properly executed notice together with irrevocable instructions to a broker providing for the assignment to the Company of the proceeds of a sale or loan with respect to some or all of the shares being acquired upon the exercise of the Option (including, without limitation, through an exercise complying with the provisions of Regulation T as promulgated from time to time by the Board of Governors of the Federal Reserve System). The Company reserves, at any and all times, the right, in the Company's sole and absolute discretion, to establish, decline to approve or terminate any program or procedure.

4.4 TAX WITHHOLDING. At the time the Option is exercised, in whole or in part, or at any time thereafter as requested by the Company, the Optionee hereby authorizes withholding from payroll and any other amounts payable to the Optionee, and otherwise agrees to make adequate provision for (including by means of a Cashless Exercise to the extent permitted by the Company), any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Participating Company Group, if any, which arise in connection

with the Option, including, without limitation, obligations arising upon (i) the exercise, in whole or in part, of the Option, (ii) the transfer, in whole or in part, of any shares acquired upon exercise of the Option, (iii) the operation of any law or regulation providing for the imputation of interest, or (iv) the lapsing of any restriction with respect to any shares acquired upon exercise of the Option. The Option is not exercisable unless the tax withholding obligations of the Participating Company Group are satisfied. Accordingly, the Company shall have no obligation to deliver shares of Stock until the tax withholding obligations of the Participating Company Group have been satisfied by the Optionee.

4.5 CERTIFICATE REGISTRATION. Except in the event the Exercise Price is paid by means of a Cashless Exercise, the certificate for the shares as to which the Option is exercised shall be registered in the name of the Optionee, or, if applicable, in the names of the heirs of the Optionee.

4.6 RESTRICTIONS ON GRANT OF THE OPTION AND ISSUANCE OF SHARES. The grant of the Option and the issuance of shares of Stock upon exercise of the Option shall be subject to compliance with all applicable requirements of federal, state or foreign law with respect to such securities. The Option may not be exercised if the issuance of shares of Stock upon exercise would constitute a violation of any applicable federal, state or foreign securities laws or other law or regulations or the requirements of any stock exchange or market system upon which the Stock may then be listed. In addition, the Option may not be exercised unless (i) a registration statement under the Securities Act shall at the time of exercise of the Option be in effect with respect to the shares issuable upon exercise of the Option or (ii) in the opinion of legal counsel to the Company, the shares issuable upon exercise of the Option may be issued in accordance with the terms of an applicable exemption from the registration requirements of the Securities Act. THE OPTIONEE IS CAUTIONED THAT THE OPTION MAY NOT BE EXERCISED UNLESS THE FOREGOING CONDITIONS ARE SATISFIED. ACCORDINGLY, THE OPTIONEE MAY NOT BE ABLE TO EXERCISE THE OPTION WHEN DESIRED EVEN THOUGH THE OPTION IS VESTED. The inability of the Company to obtain from any regulatory body having jurisdiction the authority, if any, deemed by the Company's legal counsel to be necessary to the lawful issuance and sale of any shares subject to the Option shall relieve the Company of any liability in respect of the failure to issue or sell such shares as to which such requisite authority shall not have been obtained. As a condition to the exercise of the Option, the Company may require the Optionee to satisfy any qualifications that may be necessary or appropriate, to evidence compliance with any applicable law or regulation and to make any representation or warranty with respect thereto as may be requested by the Company.

4.7 FRACTIONAL SHARES. The Company shall not be required to issue fractional shares upon the exercise of the Option.

5. NONTRANSFERABILITY OF THE OPTION.

The Option may be exercised during the lifetime of the Optionee only by the Optionee or the Optionee's guardian or legal representative and may not be assigned or transferred in any manner except by will or by the laws of descent and distribution. Following the death of the Optionee, the Option, to the extent provided in Section 7, may be exercised by

the Optionee's legal representative or by any person empowered to do so under the deceased Optionee's will or under the then applicable laws of descent and distribution.

6. TERMINATION OF THE OPTION.

The Option shall terminate and may no longer be exercised after the first to occur of (a) the Option Expiration Date, (b) the last date for exercising the Option following termination of the Optionee's Service as described in Section 7, or (c) a Change in Control to the extent provided in Section 8.

7. EFFECT OF TERMINATION OF SERVICE.

7.1 OPTION EXERCISABILITY.

(a) DISABILITY. If the Optionee's Service terminates because of the Disability of the Optionee, the Option, to the extent unexercised and exercisable on the date on which the Optionee's Service terminated, may be exercised by the Optionee (or the Optionee's guardian or legal representative) at any time prior to the expiration of twelve (12) months after the date on which the Optionee's Service terminated, but in any event no later than the date of expiration of the Option's term as set forth in the Option Agreement evidencing such Option (the "OPTION EXPIRATION DATE").

(b) DEATH. If the Optionee's Service terminates because of the death of the Optionee, the Option, to the extent unexercised and exercisable on the date on which the Optionee's Service terminated, may be exercised by the Optionee's legal representative or other person who acquired the right to exercise the Option by reason of the Optionee's death at any time prior to the expiration of twelve (12) months after the date on which the Optionee's Service terminated, but in any event no later than the Option Expiration Date.

(c) OTHER TERMINATION OF SERVICE. If the Optionee's Service terminates for any reason, except Disability or death, the Option, to the extent unexercised and exercisable by the Optionee on the date on which the Optionee's Service terminated, may be exercised by the Optionee at any time prior to the expiration of three (3) months after the date on which the Optionee's Service terminated, but in any event no later than the Option Expiration Date.

7.2 EXTENSION IF EXERCISE PREVENTED BY LAW. Notwithstanding the foregoing, if the exercise of the Option within the applicable time periods set forth in Section 7.1 is prevented by the provisions of Section 4.6, the Option shall remain exercisable until three (3) months after the date the Optionee is notified by the Company that the Option is exercisable, but in any event no later than the Option Expiration Date.

7.3 EXTENSION IF OPTIONEE SUBJECT TO SECTION 16(b). Notwithstanding the foregoing, if a sale within the applicable time periods set forth in Section 7.1 of shares acquired upon the exercise of the Option would subject the Optionee to suit under Section 16(b) of the Exchange Act, the Option shall remain exercisable until the earliest to occur of (i) the tenth

(10th) day following the date on which a sale of such shares by the Optionee would no longer be subject to such suit, (ii) the one hundred and ninetieth (190th) day after the Optionee's termination of Service, or (iii) the Option Expiration Date.

8. CHANGE IN CONTROL.

8.1 DEFINITIONS.

(a) An "OWNERSHIP CHANGE EVENT" shall be deemed to have occurred if any of the following occurs with respect to the Company: (i) the direct or indirect sale or exchange in a single or series of related transactions by the shareholders of the Company of more than fifty percent (50%) of the voting stock of the Company; (ii) a merger or consolidation in which the Company is a party; (iii) the sale, exchange, or transfer of all or substantially all of the assets of the Company; or (iv) a liquidation or dissolution of the Company.

(b) A "CHANGE IN CONTROL" shall mean an Ownership Change Event or a series of related Ownership Change Events (collectively, a "TRANSACTION") wherein the shareholders of the Company immediately before the Transaction do not retain immediately after the Transaction, in substantially the same proportions as their ownership of shares of the Company's voting stock immediately before the Transaction, direct or indirect beneficial ownership of more than fifty percent (50%) of the total combined voting power of the outstanding voting securities of the Company or, in the case of a Transaction described in Section 8.1(a)(iii), the corporation or other business entity to which the assets of the Company were transferred (the "TRANSFeree"), as the case may be. For purposes of the preceding sentence, indirect beneficial ownership shall include, without limitation, an interest resulting from ownership of the voting securities of one or more corporations or other business entities which own the Company or the Transferee, as the case may be, either directly or through one or more subsidiary corporations or other business entities. The Board shall have the right to determine whether multiple sales or exchanges of the voting securities of the Company or multiple Ownership Change Events are related, and its determination shall be final, binding and conclusive.

8.2 EFFECT OF CHANGE IN CONTROL ON OPTION. In the event of a Change in Control, the surviving, continuing, successor, or purchasing corporation or other business entity or parent thereof, as the case may be (the "ACQUIRING CORPORATION"), may, without the consent of the Optionee, either assume the Company's rights and obligations under the Option or substitute for the Option a substantially equivalent option for the Acquiring Corporation's stock. In the event the Acquiring Corporation elects not to assume the Company's rights or obligations under the Option or substitute for the Option in connection with the Change in Control, and provided that the Optionee's Service has not terminated prior to such date, any unexercised portion of the Option shall be immediately exercisable and vested in full as of ten (10) days prior to the date of the Change in Control. Any exercise of the Option that was permissible solely by reason of this Section 8.2 shall be conditioned upon the consummation of the Change in Control. The Option shall terminate and cease to be outstanding effective as of the date of the Change in Control to the extent that the Option is neither assumed or substituted for by the Acquiring Corporation in connection with the Change in Control nor exercised as of the date of the Change

in Control. Notwithstanding the foregoing, shares acquired upon exercise of the Option prior to the Change in Control and any consideration received pursuant to the Change in Control with respect to such shares shall continue to be subject to all applicable provisions of this Option Agreement except as otherwise provided herein. Furthermore, notwithstanding the foregoing, if the corporation the stock of which is subject to the Option immediately prior to an Ownership Change Event described in Section 8.1(a)(i) constituting a Change in Control is the surviving or continuing corporation and immediately after such Ownership Change Event less than fifty percent (50%) of the total combined voting power of its voting stock is held by another corporation or by other corporations that are members of an affiliated group within the meaning of Section 1504(a) of the Code without regard to the provisions of Section 1504(b) of the Code, the Option shall not terminate unless the Board otherwise provides in its discretion.

8.3 FAIR MARKET VALUE LIMITATION. If the Notice designates this Option as an Incentive Stock Option, should the exercisability of this Option be accelerated in connection with a Change in Control in accordance with Section 8.2, then to the extent that the aggregate Fair Market Value of the shares of Stock with respect to which the Optionee may exercise the Option for the first time during the calendar year of such acceleration, when added to the aggregate Fair Market Value of the shares subject to any other options designated as Incentive Stock Options granted to the Optionee under all stock option plans of the Participating Company Group prior to the Date of Option Grant with respect to which such options are exercisable for the first time during the same calendar year, exceeds One Hundred Thousand Dollars (\$100,000) (or such other limit, if any, imposed by Section 422 of the Code), the portion of the Option which exceeds such amount shall be treated as a Nonstatutory Stock Option. For purposes of the preceding sentence, options designated as Incentive Stock Options shall be taken into account in the order in which they were granted, and the Fair Market Value of shares of stock shall be determined as of the time the option with respect to such shares is granted

9. ADJUSTMENTS FOR CHANGES IN CAPITAL STRUCTURE.

In the event of any stock dividend, stock split, reverse stock split, recapitalization, combination, reclassification, or similar change in the capital structure of the Company, appropriate adjustments shall be made in the number, Exercise Price and class of shares of stock subject to the Option. If a majority of the shares which are of the same class as the shares that are subject to the Option are exchanged for, converted into, or otherwise become (whether or not pursuant to an Ownership Change Event) shares of another corporation (the "NEW SHARES"), the Board may unilaterally amend the Option to provide that the Option is exercisable for New Shares. In the event of any such amendment, the Number of Option Shares and the Exercise Price shall be adjusted in a fair and equitable manner, as determined by the Board, in its discretion. Notwithstanding the foregoing, any fractional share resulting from an adjustment pursuant to this Section 9 shall be rounded down to the nearest whole number, and in no event may the Exercise Price be decreased to an amount less than the par value, if any, of the stock subject to the Option. The adjustments determined by the Board pursuant to this Section 9 shall be final, binding and conclusive.

10. RIGHTS AS A SHAREHOLDER, EMPLOYEE OR CONSULTANT.

The Optionee shall have no rights as a shareholder with respect to any shares covered by the Option until the date of the issuance of a certificate for the shares for which the Option has been exercised (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company). No adjustment shall be made for dividends, distributions or other rights for which the record date is prior to the date such certificate is issued, except as provided in Section 9. If the Optionee is an Employee, the Optionee understands and acknowledges that, except as otherwise provided in a separate, written employment agreement between a Participating Company and the Optionee, the Optionee's employment is "at will" and is for no specified term. Nothing in this Option Agreement shall confer upon the Optionee any right to continue in the Service of a Participating Company or interfere in any way with any right of the Participating Company Group to terminate the Optionee's Service as an Employee or Consultant, as the case may be, at any time.

11. NOTICE OF SALES UPON DISQUALIFYING DISPOSITION.

The Optionee shall dispose of the shares acquired pursuant to the Option only in accordance with the provisions of this Option Agreement. In addition, if the Notice designates this Option as an Incentive Stock Option, the Optionee shall (a) promptly notify the Chief Financial Officer of the Company if the Optionee disposes of any of the shares acquired pursuant to the Option within one (1) year after the date the Optionee exercises all or part of the Option or within two (2) years after the Date of Option Grant and (b) provide the Company with a description of the circumstances of such disposition. Until such time as the Optionee disposes of such shares in a manner consistent with the provisions of this Option Agreement, unless otherwise expressly authorized by the Company, the Optionee shall hold all shares acquired pursuant to the Option in the Optionee's name (and not in the name of any nominee) for the one-year period immediately after the exercise of the Option and the two-year period immediately after Date of Option Grant. At any time during the one-year or two-year periods set forth above, the Company may place a legend on any certificate representing shares acquired pursuant to the Option requesting the transfer agent for the Company's stock to notify the Company of any such transfers. The obligation of the Optionee to notify the Company of any such transfer shall continue notwithstanding that a legend has been placed on the certificate pursuant to the preceding sentence.

12. LEGENDS.

The Company may at any time place legends referencing any applicable federal, state or foreign securities law restrictions, as well as a legend reflecting the effect of a disqualifying disposition (as described in Section 11 above) if the Option is an Incentive Stock Option, on all certificates representing shares of stock subject to the provisions of this Option Agreement. The Optionee shall, at the request of the Company, promptly present to the Company any and all certificates representing shares acquired pursuant to the Option in the possession of the Optionee in order to carry out the provisions of this Section.



AASTROM BIOSCIENCES, INC.  
NOTICE OF GRANT OF 2004 STOCK OPTION

\_\_\_\_\_ (the "OPTIONEE") has been granted an option (the "OPTION") to purchase certain shares of Stock of Aastrom Biosciences, Inc. pursuant to the Aastrom Biosciences, Inc. 2004 Stock Option Plan (the "Plan"), as follows:

DATE OF OPTION GRANT: \_\_\_\_\_

NUMBER OF OPTION SHARES: \_\_\_\_\_

EXERCISE PRICE: \_\_\_\_\_ per share

INITIAL VESTING DATE: The date one year after \_\_\_\_\_

OPTION EXPIRATION DATE: The date ten (10) years after the Date of Option Grant.

TAX STATUS OF OPTION: INCENTIVE Stock Option.

VESTED SHARES: Except as provided in the Stock Option Agreement, the number of Vested Shares (disregarding any resulting fractional share) as of any date is determined by multiplying the Number of Option Shares by the "VESTED RATIO" determined as of such date as follows:

Vested Ratio

Prior to Initial Vesting Date 0  
On Initial Vesting Date, provided the Optionee's Service has not terminated prior to such date

Plus:  
For each three full months of the Optionee's continuous Service from Initial Vesting Date until the Vested Ratio equals 1/1, an additional

By their signatures below, the Company and the Optionee agree that the Option is governed by this Notice and by the provisions of the Plan and the Stock Option Agreement, both of which are attached to and made a part of this document. The Optionee acknowledges receipt of copies of the Plan and the Stock Option Agreement, represents that the Optionee has read and is familiar with their provisions, and hereby accepts the Option subject to all of their terms and conditions.

Aastrom Biosciences, Inc.  
24 Frank Lloyd Wright Dr., Lobby L.  
Ann Arbor, MI 48105

\_\_\_\_\_  
R. DOUGLAS ARMSTRONG, PH.D.  
CHIEF EXECUTIVE OFFICER

\_\_\_\_\_  
DATE

\_\_\_\_\_  
DATE

AASTROM BIOSCIENCES, INC.  
NOTICE OF GRANT OF RESTRICTED STOCK

\_\_\_\_\_ (the "PARTICIPANT") has been granted an award (the "AWARD") pursuant to the Aastrom Biosciences, Inc. 2004 Equity Incentive Plan (the "PLAN") of certain shares of Stock (the "SHARES"), as follows:

DATE OF GRANT: \_\_\_\_\_

TOTAL NUMBER OF SHARES: \_\_\_\_\_

VESTED SHARES: Except as provided in the Restricted Stock Agreement and provided that the Participant's Service has not terminated prior to the relevant date, the number of Vested Shares shall cumulatively increase on each respective date set forth below by the number of shares set forth opposite such date, as follows:

VESTING DATE	NO. SHARES VESTING	CUMULATIVE NO. VESTED SHARES
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By their signatures below or by electronic acceptance or authentication in a form authorized by the Company, the Company and the Participant agree that the Award is governed by this Grant Notice and by the provisions of the Plan and the Restricted Stock Agreement, both of which are made part of this document. The Participant acknowledges that copies of the Plan, Restricted Stock Agreement and the prospectus for the Plan are available on the Company's internal web site and may be viewed and printed by the Participant for attachment to the Participant's copy of this Grant Notice. The Participant represents that the Participant has read and is familiar with the provisions of the Plan and the Restricted Stock Agreement, and hereby accepts the Award subject to all of their terms and conditions.

AASTROM BIOSCIENCES, INC.

PARTICIPANT

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

\_\_\_\_\_  
Signature

Its: \_\_\_\_\_

\_\_\_\_\_  
Date

Address: Domino's Farms, Lobby L  
24 Frank Lloyd Wright Drive  
Ann Arbor, MI 48105

\_\_\_\_\_  
Address

ATTACHMENTS: 2004 Equity Incentive Plan, as amended to the Date of Grant;  
Restricted Stock Agreement; Assignment Separate from Certificate  
and Plan Prospectus

ASSIGNMENT SEPARATE FROM CERTIFICATE

FOR VALUE RECEIVED the undersigned does hereby sell, assign and transfer unto \_\_\_\_\_ (\_\_\_\_\_) shares of the Capital Stock of AASTROM BIOSCIENCES, INC. standing in the undersigned's name on the books of said corporation represented by Certificate No. \_\_\_\_\_ herewith and does hereby irrevocably constitute and appoint \_\_\_\_\_ Attorney to transfer the said stock on the books of said corporation with full power of substitution in the premises.

Dated: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

Instructions: Please do not fill in any blanks other than the signature line. The purpose of this assignment is to enable the Corporation to exercise its Company Reacquisition Right set forth in the Restricted Stock Agreement without requiring additional signatures on the part of the Participant.

AASTROM BIOSCIENCES, INC.  
RESTRICTED STOCK AGREEMENT

Aastrom Biosciences, Inc. has granted to the Participant named in the Notice of Grant of Restricted Stock (the "GRANT NOTICE") to which this Restricted Stock Agreement (the "AGREEMENT") is attached an Award consisting of Shares subject to the terms and conditions set forth in the Grant Notice and this Agreement. The Award has been granted pursuant to the Aastrom Biosciences, Inc. 2004 Equity Incentive Plan (the "PLAN"), as amended to the Date of Grant, the provisions of which are incorporated herein by reference. By signing the Grant Notice, the Participant: (a) acknowledges receipt of and represents that the Participant has read and is familiar with the Grant Notice, this Agreement, the Plan and a prospectus for the Plan in the form most recently registered with the Securities and Exchange Commission (the "PLAN PROSPECTUS"), (b) accepts the Award subject to all of the terms and conditions of the Grant Notice, this Agreement and the Plan and (c) agrees to accept as binding, conclusive and final all decisions or interpretations of the Committee upon any questions arising under the Grant Notice, this Agreement or the Plan.

1. DEFINITIONS AND CONSTRUCTION.

1.1 DEFINITIONS. Unless otherwise defined herein, capitalized terms shall have the meanings assigned to such terms in the Grant Notice or the Plan.

1.2 CONSTRUCTION. Captions and titles contained herein are for convenience only and shall not affect the meaning or interpretation of any provision of this Agreement. Except when otherwise indicated by the context, the singular shall include the plural and the plural shall include the singular. Use of the term "or" is not intended to be exclusive, unless the context clearly requires otherwise.

2. ADMINISTRATION.

All questions of interpretation concerning the Grant Notice and this Agreement shall be determined by the Committee. All determinations by the Committee shall be final and binding upon all persons having an interest in the Award. Any Officer shall have the authority to act on behalf of the Company with respect to any matter, right, obligation, or election which is the responsibility of or which is allocated to the Company herein, provided the Officer has apparent authority with respect to such matter, right, obligation, or election.

3. THE AWARD.

3.1 GRANT AND ISSUANCE OF SHARES. On the Date of Grant, the Participant shall acquire and the Company shall issue, subject to the provisions of this Agreement, a number of Shares equal to the Total Number of Shares set forth in the Grant Notice. As a condition to the issuance of the Shares, the Participant shall execute and deliver to the Company along with the Grant Notice the Assignment Separate from Certificate duly endorsed (with date and number of shares blank) in the form attached to the Grant Notice.

3.2 NO MONETARY PAYMENT REQUIRED. The Participant is not required to make any monetary payment (other than applicable tax withholding, if any) as a condition to receiving the Shares, the consideration for which shall be past services actually rendered and/or future services to be rendered to a Participating Company or for its benefit. Notwithstanding the foregoing, if required by applicable state corporate law, the Participant shall furnish consideration in the form of cash or past services rendered to a Participating Company or for its benefit having a value not less than the par value of the Shares issued pursuant to the Award.

3.3 BENEFICIAL OWNERSHIP OF SHARES; CERTIFICATE REGISTRATION. The Participant hereby authorizes the Company, in its sole discretion, to deposit the Shares with the Company's transfer agent, including any successor transfer agent, to be held in book entry form during the term of the Escrow pursuant to Section 6. Furthermore, the Participant hereby authorizes the Company, in its sole discretion, to deposit, following the term of such Escrow, for the benefit of the Participant with any broker with which the Participant has an account relationship of which the Company has notice any or all Shares which are no longer subject to such Escrow. Except as provided by the foregoing, a certificate for the Shares shall be registered in the name of the Participant, or, if applicable, in the names of the heirs of the Participant.

3.4 ISSUANCE OF SHARES IN COMPLIANCE WITH LAW. The issuance of the Shares shall be subject to compliance with all applicable requirements of federal, state or foreign law with respect to such securities. No Shares shall be issued hereunder if their issuance would constitute a violation of any applicable federal, state or foreign securities laws or other law or regulations or the requirements of any stock exchange or market system upon which the Stock may then be listed. The inability of the Company to obtain from any regulatory body having jurisdiction the authority, if any, deemed by the Company's legal counsel to be necessary to the lawful issuance of any Shares shall relieve the Company of any liability in respect of the failure to issue such Shares as to which such requisite authority shall not have been obtained. As a condition to the issuance of the Shares, the Company may require the Participant to satisfy any qualifications that may be necessary or appropriate, to evidence compliance with any applicable law or regulation and to make any representation or warranty with respect thereto as may be requested by the Company.

#### 4. VESTING OF SHARES.

4.1 NORMAL VESTING. Except as provided in Section 4.2, the Shares shall vest and become Vested Shares as provided in the Grant Notice. No additional Shares will become Vested Shares following the Participant's termination of Service for any reason.

4.2 ACCELERATION OF VESTING UPON A CHANGE IN CONTROL. In the event of a Change in Control, the vesting of the Shares shall be accelerated in full and the Total Number of Shares shall be deemed Vested Shares effective as of the date of the Change in Control, provided that the Participant's Service has not terminated prior to such date and provided further that the employee has been employed at least one year by the Company at the time of the Change in Control.

#### 4.3 FEDERAL EXCISE TAX UNDER SECTION 4999 OF THE CODE.

(a) EXCESS PARACHUTE PAYMENT. In the event that any acceleration of vesting pursuant to this Agreement and any other payment or benefit received or to be received by the Participant would subject the Participant to any excise tax pursuant to Section 4999 of the Code due to the characterization of such acceleration of vesting, payment or benefit as an excess parachute payment under Section 280G of the Code, the Participant may elect, in his or her sole discretion, to reduce the amount of any acceleration of vesting called for under this Agreement in order to avoid such characterization.

(b) DETERMINATION BY INDEPENDENT ACCOUNTANTS. To aid the Participant in making any election called for under Section 4.3(a), upon the occurrence of any event that might reasonably be anticipated to give rise to the acceleration of vesting under Section 4.2 (an "EVENT"), the Company shall promptly request a determination in writing by independent public accountants selected by the Company (the "ACCOUNTANTS"). Unless the Company and the Participant otherwise agree in writing, the Accountants shall determine and report to the Company and the Participant within twenty (20) days of the date of the Event the amount of such acceleration of vesting, payments and benefits which would produce the greatest after-tax benefit to the Participant. For the purposes of such determination, the Accountants may rely on reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code. The Company and the Participant shall furnish to the Accountants such information and documents as the Accountants may reasonably request in order to make their required determination. The Company shall bear all fees and expenses the Accountants may reasonably charge in connection with their services contemplated by this Section.

#### 5. COMPANY REACQUISITION RIGHT.

5.1 GRANT OF COMPANY REACQUISITION RIGHT. Except to the extent otherwise provided in an employment agreement between a Participating Company and the Participant which refers to this Award, in the event that (a) the Participant's Service terminates for any reason or no reason, with or without Cause, or (b) the Participant, the Participant's legal representative, or other holder of the Shares, attempts to sell, exchange, transfer, pledge, or otherwise dispose of (other than pursuant to an Ownership Change Event), including, without limitation, any transfer to a nominee or agent of the Participant, any Shares which are not Vested Shares ("UNVESTED SHARES"), the Company shall automatically reacquire the Unvested Shares, and the Participant shall not be entitled to any payment therefor (the "COMPANY REACQUISITION RIGHT").

5.2 OWNERSHIP CHANGE EVENT. Upon the occurrence of an Ownership Change Event, any and all new, substituted or additional securities or other property to which the Participant is entitled by reason of the Participant's ownership of Unvested Shares shall be immediately subject to the Company Reacquisition Right and included in the terms "Shares," "Stock" and "Unvested Shares" for all purposes of the Company Reacquisition Right with the same force and effect as the Unvested Shares immediately prior to the Ownership Change Event. For purposes of determining the number of Vested Shares following an Ownership Change Event, credited Service shall include all Service with any corporation which is a Participating

Company at the time the Service is rendered, whether or not such corporation is a Participating Company both before and after the Ownership Change Event.

6. ESCROW.

6.1 APPOINTMENT OF AGENT. To ensure that Shares subject to the Company Reacquisition Right will be available for reacquisition, the Participant and the Company hereby appoint the Secretary of the Company, or any other person designated by the Company, as their agent and as attorney-in-fact for the Participant (the "AGENT") to hold any and all Unvested Shares and to sell, assign and transfer to the Company any such Unvested Shares reacquired by the Company pursuant to the Company Reacquisition Right. The Participant understands that appointment of the Agent is a material inducement to make this Agreement and that such appointment is coupled with an interest and is irrevocable. The Agent shall not be personally liable for any act the Agent may do or omit to do hereunder as escrow agent, agent for the Company, or attorney in fact for the Participant while acting in good faith and in the exercise of the Agent's own good judgment, and any act done or omitted by the Agent pursuant to the advice of the Agent's own attorneys shall be conclusive evidence of such good faith. The Agent may rely upon any letter, notice or other document executed by any signature purporting to be genuine and may resign at any time.

6.2 ESTABLISHMENT OF ESCROW. The Participant authorizes the Company to deposit the certificates evidencing the Unvested Shares with the Company's Agent and the Participant agrees to deliver to the Agent an Assignment Separate from Certificate with respect to such Unvested Shares and each such certificate duly endorsed (with date and number of Shares blank) in the form attached to the Notice, to be held by the Agent under the terms and conditions of this Section 6 (the "ESCROW"). Upon the occurrence of a Change in Control or a change, as described in Section 8, in the character or amount of any outstanding stock of the corporation the stock of which is subject to the provisions of this Agreement, any and all new, substituted or additional securities or other property to which the Participant is entitled by reason of his or her ownership of the Shares that remain, following such Change in Control or change described in Section 8, subject to the Company Reacquisition Right shall be immediately subject to the Escrow to the same extent as the Shares immediately before such event. The Company shall bear the expenses of the Escrow.

6.3 DELIVERY OF SHARES TO PARTICIPANT. The Escrow shall continue with respect to any Shares for so long as such Shares remain subject to the Company Reacquisition Right. Upon termination of the Reacquisition Right with respect to Shares, the Company shall so notify the Agent and direct the Agent to deliver such number of Shares to the Participant. As soon as practicable after receipt of such notice, the Agent shall cause to be delivered to the Participant the Shares specified by such notice, and the Escrow shall terminate with respect to such Shares.

7. TAX MATTERS.

7.1 TAX WITHHOLDING.

(a) IN GENERAL. At the time the Grant Notice is executed, or at any time thereafter as requested by a Participating Company, the Participant hereby authorizes withholding from payroll and any other amounts payable to the Participant, and otherwise agrees to make adequate provision for, any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Participating Company, if any, which arise in connection with the Award, including, without limitation, obligations arising upon (a) the transfer of Shares to the Participant, (b) the lapsing of any restriction with respect to any Shares, (c) the filing of an election to recognize tax liability, or (d) the transfer by the Participant of any Shares. The Company shall have no obligation to deliver the Shares or to release any Shares from the Escrow established pursuant to Section 6 until the tax withholding obligations of the Participating Company have been satisfied by the Participant.

(b) WITHHOLDING IN SHARES. The Participant may satisfy all or any portion of a Participating Company's tax withholding obligations by requesting the Company to withhold a number of whole, Vested Shares otherwise deliverable to the Participant or by tendering to the Company a number of whole, Vested Shares or vested shares acquired otherwise than pursuant to the Award having, in any such case, a fair market value, as determined by the Company as of the date on which the tax withholding obligations arise, not in excess of the amount of such tax withholding obligations determined by the applicable minimum statutory withholding rates. Any adverse consequences to the Participant resulting from the procedure permitted under this Section, including, without limitation, tax consequences, shall be the sole responsibility of the Participant.

7.2 ELECTION UNDER SECTION 83(b) OF THE CODE.

(a) The Participant understands that Section 83 of the Code taxes as ordinary income the difference between the amount paid for the Shares, if anything, and the fair market value of the Shares as of the date on which the Shares are "substantially vested," within the meaning of Section 83. In this context, "substantially vested" means that the right of the Company to reacquire the Shares pursuant to the Company Reacquisition Right has lapsed. The Participant understands that he or she may elect to have his or her taxable income determined at the time he or she acquires the Shares rather than when and as the Company Reacquisition Right lapses by filing an election under Section 83(b) of the Code with the Internal Revenue Service no later than thirty (30) days after the date of acquisition of the Shares. The Participant understands that failure to make a timely filing under Section 83(b) will result in his or her recognition of ordinary income, as the Company Reacquisition Right lapses, on the difference between the purchase price, if anything, and the fair market value of the Shares at the time such restrictions lapse. The Participant further understands, however, that if Shares with respect to which an election under Section 83(b) has been made are forfeited to the Company pursuant to its Company Reacquisition Right, such forfeiture will be treated as a sale on which there is realized a loss equal to the excess (if any) of the amount paid (if any) by the Participant for the forfeited Shares over the amount realized (if any) upon their forfeiture. If the Participant has paid nothing for the forfeited Shares and has received no payment upon their forfeiture, the Participant

understands that he or she will be unable to recognize any loss on the forfeiture of the Shares even though the Participant incurred a tax liability by making an election under Section 83(b).

(b) The Participant understands that he or she should consult with his or her tax advisor regarding the advisability of filing with the Internal Revenue Service an election under Section 83(b) of the Code, which must be filed no later than thirty (30) days after the date of the acquisition of the Shares pursuant to this Agreement. Failure to file an election under Section 83(b), if appropriate, may result in adverse tax consequences to the Participant. The Participant acknowledges that he or she has been advised to consult with a tax advisor regarding the tax consequences to the Participant of the acquisition of Shares hereunder. ANY ELECTION UNDER SECTION 83(b) THE PARTICIPANT WISHES TO MAKE MUST BE FILED NO LATER THAN 30 DAYS AFTER THE DATE ON WHICH THE PARTICIPANT ACQUIRES THE SHARES. THIS TIME PERIOD CANNOT BE EXTENDED. THE PARTICIPANT ACKNOWLEDGES THAT TIMELY FILING OF A SECTION 83(b) ELECTION IS THE PARTICIPANT'S SOLE RESPONSIBILITY, EVEN IF THE PARTICIPANT REQUESTS THE COMPANY OR ITS REPRESENTATIVE TO FILE SUCH ELECTION ON HIS OR HER BEHALF.

(c) The Participant will notify the Company in writing if the Participant files an election pursuant to Section 83(b) of the Code. The Company intends, in the event it does not receive from the Participant evidence of such filing, to claim a tax deduction for any amount which would otherwise be taxable to the Participant in the absence of such an election.

#### 8. ADJUSTMENTS FOR CHANGES IN CAPITAL STRUCTURE.

Subject to any required action by the stockholders of the Company, in the event of any change in the Stock effected without receipt of consideration by the Company, whether through merger, consolidation, reorganization, reincorporation, recapitalization, reclassification, stock dividend, stock split, reverse stock split, split-up, split-off, spin-off, combination of shares, exchange of shares, or similar change in the capital structure of the Company, or in the event of payment of a dividend or distribution to the stockholders of the Company in a form other than Stock (excepting normal cash dividends) that has a material effect on the Fair Market Value of shares of Stock, appropriate adjustments shall be made in the number and kind of shares subject to the Award, in order to prevent dilution or enlargement of the Participant's rights under the Award. For purposes of the foregoing, conversion of any convertible securities of the Company shall not be treated as "effected without receipt of consideration by the Company." Any fractional share resulting from an adjustment pursuant to this Section shall be rounded down to the nearest whole number. Such adjustments shall be determined by the Committee, and its determination shall be final, binding and conclusive.

#### 9. RIGHTS AS A STOCKHOLDER, DIRECTOR, EMPLOYEE OR CONSULTANT.

The Participant shall have no rights as a stockholder with respect to any Shares subject to the Award until the date of the issuance of the Shares (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company). No adjustment shall be made for dividends, distributions or other rights for which the record date is

prior to the date the Shares are issued, except as provided in Section 8. Subject the provisions of this Agreement, the Participant shall exercise all rights and privileges of a stockholder of the Company with respect to Shares deposited in the Escrow pursuant to Section 6. If the Participant is an Employee, the Participant understands and acknowledges that, except as otherwise provided in a separate, written employment agreement between a Participating Company and the Participant, the Participant's employment is "at will" and is for no specified term. Nothing in this Agreement shall confer upon the Participant any right to continue in the Service of a Participating Company or interfere in any way with any right of the Participating Company Group to terminate the Participant's Service at any time.

10. LEGENDS.

The Company may at any time place legends referencing the Company Recapitalization Right and any applicable federal, state or foreign securities law restrictions on all certificates representing the Shares. The Participant shall, at the request of the Company, promptly present to the Company any and all certificates representing the Shares in the possession of the Participant in order to carry out the provisions of this Section. Unless otherwise specified by the Company, legends placed on such certificates may include, but shall not be limited to, the following:

"THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO RESTRICTIONS SET FORTH IN AN AGREEMENT BETWEEN THIS CORPORATION AND THE REGISTERED HOLDER, OR HIS PREDECESSOR IN INTEREST, A COPY OF WHICH IS ON FILE AT THE PRINCIPAL OFFICE OF THIS CORPORATION."

11. TRANSFERS IN VIOLATION OF AGREEMENT.

No Shares may be sold, exchanged, transferred, assigned, pledged, hypothecated or otherwise disposed of, including by operation of law, in any manner which violates any of the provisions of this Agreement and, except pursuant to an Ownership Change Event, until the date on which such shares become Vested Shares, and any such attempted disposition shall be void. The Company shall not be required (a) to transfer on its books any Shares which will have been transferred in violation of any of the provisions set forth in this Agreement or (b) to treat as owner of such Shares or to accord the right to vote as such owner or to pay dividends to any transferee to whom such Shares will have been so transferred. In order to enforce its rights under this Section, the Company shall be authorized to give a stop transfer instruction with respect to the Shares to the Company's transfer agent.

12. MISCELLANEOUS PROVISIONS.

12.1 TERMINATION OR AMENDMENT. The Committee may terminate or amend the Plan or this Agreement at any time; provided, however, that no such termination or amendment may adversely affect the Participant's rights under this Agreement without the consent of the Participant unless such termination or amendment is necessary to comply with applicable law or government regulation. No amendment or addition to this Agreement shall be effective unless in writing.

12.2 NONTRANSFERABILITY OF THE AWARD. The right to acquire Shares pursuant to the Award shall not be subject in any manner to anticipation, alienation, sale, exchange, transfer, assignment, pledge, encumbrance, or garnishment by creditors of the Participant or the Participant's beneficiary, except transfer by will or by the laws of descent and distribution. All rights with respect to the Award shall be exercisable during the Participant's lifetime only by the Participant or the Participant's guardian or legal representative.

12.3 FURTHER INSTRUMENTS. The parties hereto agree to execute such further instruments and to take such further action as may reasonably be necessary to carry out the intent of this Agreement.

12.4 BINDING EFFECT. This Agreement shall inure to the benefit of the successors and assigns of the Company and, subject to the restrictions on transfer set forth herein, be binding upon the Participant and the Participant's heirs, executors, administrators, successors and assigns.

12.5 DELIVERY OF DOCUMENTS AND NOTICES. Any document relating to participation in the Plan or any notice required or permitted hereunder shall be given in writing and shall be deemed effectively given (except to the extent that this Agreement provides for effectiveness only upon actual receipt of such notice) upon personal delivery, electronic delivery at the e-mail address, if any, provided for the Participant by a Participating Company, or upon deposit in the U.S. Post Office or foreign postal service, by registered or certified mail, or with a nationally recognized overnight courier service, with postage and fees prepaid, addressed to the other party at the address shown below that party's signature to the Grant Notice or at such other address as such party may designate in writing from time to time to the other party.

(a) DESCRIPTION OF ELECTRONIC DELIVERY. The Plan documents, which may include but do not necessarily include: the Plan, the Grant Notice, this Agreement, the Plan Prospectus, and any reports of the Company provided generally to the Company's stockholders, may be delivered to the Participant electronically. In addition, the parties may deliver electronically any notices called for in connection with the Escrow and the Participant may deliver electronically the Grant Notice to the Company or to such third party involved in administering the Plan as the Company may designate from time to time. Such means of electronic delivery may include but do not necessarily include the delivery of a link to a Company intranet or the internet site of a third party involved in administering the Plan, the delivery of the document via e-mail or such other means of electronic delivery specified by the Company.

(b) CONSENT TO ELECTRONIC DELIVERY. The Participant acknowledges that the Participant has read Section 12.5(a) of this Agreement and consents to the electronic delivery of the Plan documents, the Grant Notice and notices in connection with the Escrow, as described in Section 12.5(a). The Participant acknowledges that he or she may receive from the Company a paper copy of any documents delivered electronically at no cost to the Participant by contacting the Company by telephone or in writing. The Participant further acknowledges that the Participant will be provided with a paper copy of any documents if the attempted electronic delivery of such documents fails. Similarly, the Participant understands that the Participant must provide the Company or any designated third party administrator with a paper copy of any

documents if the attempted electronic delivery of such documents fails. The Participant may revoke his or her consent to the electronic delivery of documents described in Section 12.5(a) or may change the electronic mail address to which such documents are to be delivered (if Participant has provided an electronic mail address) at any time by notifying the Company of such revoked consent or revised e-mail address by telephone, postal service or electronic mail. Finally, the Participant understands that he or she is not required to consent to electronic delivery of documents described in Section 12.5(a).

12.6 INTEGRATED AGREEMENT. The Grant Notice, this Agreement and the Plan together with any employment, service or other agreement between the Participant and a Participating Company referring to the Award shall constitute the entire understanding and agreement of the Participant and the Participating Company Group with respect to the subject matter contained herein or therein and supersedes any prior agreements, understandings, restrictions, representations, or warranties among the Participant and the Participating Company Group with respect to such subject matter other than those as set forth or provided for herein or therein. To the extent contemplated herein or therein, the provisions of the Grant Notice and the Agreement shall survive any settlement of the Award and shall remain in full force and effect.

12.7 APPLICABLE LAW. This Agreement shall be governed by the laws of the State of Michigan as such laws are applied to agreements between Michigan residents entered into and to be performed entirely within the State of Michigan.

12.8 COUNTERPARTS. The Grant Notice may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

AASTROM BIOSCIENCES, INC.  
EMPLOYEE COMPENSATION GUIDELINES  
AUGUST 12, 2005

1. BACKGROUND

Compensation of executives and employees at Aastrom has traditionally been through two mechanisms:

- Salary (reviewed on an annual basis)
- Stock Option Grant (base grants and annual grants)

The use of bonus compensation awards has also been employed (either in the form of cash or stock option grants), which were awarded on a case-by-case basis to recognize a special individual performance that resulted in a material benefit to the Company.

In November 2004, the Company's shareholders and Board of Directors approved the Aastrom 2004 Equity Incentive Plan, which authorizes the Company's Board of Directors to establish from time to time a variety of different types of equity compensation programs, including stock options and restricted stock grants.

Problems with the stock option grant program resulting from stock price volatility, together with recent changes in the required expense accounting of stock option grants, have led the Compensation Committee to evaluate Restricted Stock Grants as an alternative to the traditional Stock Option awards. In this process, the Committee also desired to introduce more financial incentives that are tied to the performance of the Company and the individual employee. With Aastrom now entering a period with a defined strategic plan, and with a fiscal position more conducive for a different approach to overall compensation, a revised compensation approach is being introduced that is intended to better align employee compensation with progress, and to address some of the inadequacies of the past compensation approach.

The new compensation plan consists of two new elements which are added to the employee's salary cash compensation:

- Annual Cash Bonus plan (which may be paid currently or deferred)
- Long-term Restricted Stock plan.

The Annual Cash Bonus Plan is a new element of annual compensation, and the Restricted Stock Plan replaces and enhances the Aastrom stock option program. The new program offers potentially greater financial reward, but having these financial incentives tied to the employee and the Company meeting certain milestones objectives. The result is a significant percentage of the employee's potential compensation being tied to the Company's and the employee's performance.

Notwithstanding the terms outlined for these programs, management or the Board of Directors may choose to override the plan if necessary to avoid providing an unanticipated and unintended windfall to a specific employee or, in the alternative, to avoid unfairly penalizing an otherwise deserving employee.

All "At Risk" awards are subject to approval of the annual accounts by the Board of Directors. In order to be eligible for any "At Risk" compensation, the employee must still be employed on the date the annual accounts are approved by the Board, with exceptions to be made for employee death and permanent total disability; and with other exceptions to be made at the discretion of management for employee retirement and extraordinary circumstances.

NOTE: The Company will continue to additionally use discretionary bonus awards (which may be in stock options, restricted stock, or cash) to recognize special performance and achievement, or to adjust a recognized compensation inequity, that is over and above the Cash Bonus Plan. Further, the Company may also establish one or more specific bonus objectives for which a specific bonus would be paid upon achievement (with payment in the form of cash or equity).

## 2. DESCRIPTION OF ANNUAL CASH BONUS PLAN

For the "at-risk" compensation programs, individual performance goals and corporate performance targets will be established and communicated within the first quarter of each fiscal year, and used as guiding criteria for the level of Annual Cash Bonus and Restricted Stock that will be given to the employee as recognition of the past years performance.

Annually, 100% of the Cash Bonus and 60 % of the Restricted Stock award are at risk, and are tied to a combination of corporate and individual performance ("At Risk Compensation"). The Restricted Stock program will have 40 % of the total annual award available that is not at risk, but which vests with the passage of time (a more complete description of the Restricted Stock program is provided in Exhibit 4, entitled "Employee Restricted Stock Grant Program").

The level of Cash Bonus and Restricted Stock award available to each employee varies depending on the employee's position level and Cash Salary Base. Examples of the compensation levels and percentage of total compensation at risk for each management level are set forth in Exhibit 1. Risk to total compensation for senior management is provided in Exhibit 2. A sample calculation is provided in Exhibit 3.

The ANNUAL CASH BONUS is a bonus to be paid after the end of the fiscal year and the acceptance of the financial accounts by the Board of directors. All employees at the manager or program manager level or above are eligible for the Cash Bonus program. Individuals promoted or hired into a new eligible level during the year will have their bonus calculated on a pro rata basis.

An individual's TARGET CASH BONUS for each position can be determined by multiplying the individual's Cash Salary Base (the base salary for the individual at the beginning of the fiscal year or when an individual is hired or is promoted into a new bonus eligible position) by the assigned percentage based on job classification.

TARGET CASH BONUS

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CEO	40 % of Cash Salary Base
COO	35 % of Cash Salary Base
Senior VP	30 % of Cash Salary Base
VP	30 % of Cash Salary Base
Senior Director (includes Senior Program Director)	25 % of Cash Salary Base
Director (Includes Program Director/Leader)	20 % of Cash Salary Base
Manager (Includes Program Manager)	15 % of Cash Salary Base

Procedure for Annual Cash Bonus Awards

Note: All final amounts will be rounded up to the nearest \$10 for more simple administration.

Step One: Determination if Affordability Target is Met

At completion of the fiscal year, the Board of Directors determine if the Affordability Target has been met, or alternatively if it may be met pending an elective financial event. If the Affordability Target has been met, then the Annual Cash Bonus will be made. If it may be met pending an elective financial event the Annual Cash bonus will be deferred or paid in restricted stock at the election of the Board. If the Affordability Target is otherwise missed, there will be no Annual Cash Bonus Award.

The AFFORDABILITY TARGET is the target amount of cash on the balance sheet at the end of the fiscal year, as determined by the Board of Directors within the first quarter of the fiscal year. The Annual Cash Bonus program may be paid only if there is sufficient cash available for corporate needs as determined by the Affordability Target. If the Company misses the Affordability Target, there would be no Annual Cash Bonus. However, in certain limited circumstances the Board may, at its discretion, elect to defer some or all of the cash bonus if the Affordability Target is missed for reasons related to a delayed but expected near term funding event (e.g. equity financing or alliance funding). In certain rare operational circumstances of great progress but with corresponding prudence on use of available cash, the Board also has the discretionary decision to have some or all of the bonus be paid with use of restricted stock.

Step Two: Determination of the Company Performance

Board of Directors determines the level of Company Performance (from 0 to 100 %, at 10% increments), based on the stated objectives laid out at the start of the previous fiscal year (e.g. Operating Plan objectives and milestones). This percentage will then be used for the calculation formulas for both the Annual Cash Bonus and the Restricted Stock awards.

For example, if the total Annual Cash Bonus target is \$20,000 and the Company Performance is determined to be 80%, then the Annual Cash Bonus available for applying the Individual Employee Performance measurement is:

$$20,000 \times 0.80 = \$16,000$$

The Company Performance Objectives will be based on objective, measurable, achievable and realistic criteria. However, it is the intent to have the 100% level represent both generally expected as well as challenging reach milestones.

### Step Three: Determination of the Individual Employee Performance

The employee's immediate supervisor determines the level of Individual Employee performance (with review and oversight by the next level of management) for the prior fiscal year. The level of successful accomplishment of his or her performance targets will determine the percentage (0 to 100 %, at 10% increments) of the available risk portion of the Annual Cash Bonus and the Restricted Stock awards that will be made.

However, should the Company's performance fail to meet minimum expectations, then none of the employees would be eligible for an Annual Cash Bonus, nor would the employee be eligible for the corporate performance Restricted Stock Award. Generally, not meeting expectations means the Company failing to achieve at least 50% of the performance objectives.

The Individual Employee Performance Objectives are developed in a negotiated manner between the individual and his or her supervisor. In the case of the CEO those targets will be negotiated with the Board. Target objectives will be quantifiable, objective, achievable, and realistic. Individual and corporate objectives will generally be reviewed twice during the year, and, if circumstances warrant, may be modified in appropriate circumstances. (For example if patients accrue more rapidly than anticipated in key trials, other objectives would be modified.)

However, should an employee's performance fail to meet minimum expectations, then the employee would not be eligible for any Annual Cash Bonus, nor would the employee be eligible for the individual performance Restricted Stock Award. Generally, not meeting expectations means the employee failing to achieve at least 50% of the performance objectives, or has other significant personal performance problems related to his/her job description or Company policies and procedures, as noted through the performance review process.

### Step Four: Calculation of the Annual Cash Bonus

If Aastrom meets its Affordability Target, or the Board chooses to defer the cash payment, then the Annual Cash bonus calculation is as follows:

$$\text{Annual Cash Bonus} = [\text{Target Cash Bonus}] \times [\text{Company Performance percentage}] \times [\text{Employee Individual Performance percentage}].$$

For Example, assume: The Company meets the Affordability Target and 80 % of the Company Objectives and the individual meets 90 % of his or her Individual Objectives. The actual Cash Bonus would be 72 % of the Target Cash Bonus.

### 3. GENERAL DESCRIPTION OF EMPLOYEE RESTRICTED STOCK GRANT PROGRAM

The principal Long-term Incentive Plan for the Company is the Employee Restricted Stock Grant Program, which is described in greater detail in Exhibit 4. In short, this program provides vesting stock awards, with a large percent "at-risk", and will replace the previous use of base and annual stock option grants. The amount of the restricted stock award is based on a combination of three components: 40 % of the target award is to be an Annual Grant based on continuing employment. The remaining 60 % of the theoretical grant (the "at-risk" award) is divided into two equal pieces. Up to one-half of the at-risk piece (or up to 30 % of the total theoretical award) will be granted based on the Company meeting the Company Performance Objectives. Up to one-half (or 30 % of the total theoretical award) will be granted based on the individual meeting his or her Personal Objectives. Once an award is granted, vesting ownership will occur over a four (4) year annual schedule (25% vesting on each of the next four anniversaries of the grant date).

For example, assume the same facts as in the Annual Cash bonus example described above. Assume further that an individual is entitled to a theoretical restricted stock grant of 20,000 shares based on his or her job classification and Cash Salary Base. The actual Restricted Stock Award to an individual employed on approval date would be 18,200 shares. [8,000 shares (40% of 20,000 shares based on employment on the appropriate date) + 4,800 shares (30 % of 20,000 shares X 80 % of Corporate Objectives met) + 5,400 shares (30 % of 20,000 shares X 90 % of the Individual Objectives met.)]

4,550 shares (25% of the grant of 18,200 shares) would vest on each of the next four anniversaries of the grant date if the employee has been and is continued to be employed as of each anniversary date.

Further examples and detail are provided in Exhibit 4.

Note: All final share award numbers will be rounded up to the nearest 100 shares for more simple administration.

For Initial Grant calculations and grants during the employees first partial year, see the explanation in the definitions.

Exhibit 1

INCENTIVE COMPENSATION LEVELS BY EMPLOYMENT LEVEL

CEO	Cash bonus 40% of base, *	RSI grant 75% of base*
COO	Cash bonus 35% of base,	RSI grant 60% of base
Senior VP	Cash bonus 30% of base,	RSI grant 50% of base
VP	Cash bonus 30% of base,	RSI grant 45% of base
Senior Director	Cash bonus 25% of base,	RSI grant 30% of base
Director	Cash bonus 20% of base,	RSI grant 25% of base
Manager	Cash bonus 15% of base,	RSI grant 15% of base
All other employees		RSI grant 10% of base

Note: Senior Director includes senior program director, director level includes program leader and manager level includes project managers for incentive purposes.

\* base means Cash Salary Base for the employee

RSI means Restrictive Stock dollar amount

Exhibit 2

EXAMPLES OF AT RISK CALCULATION BY LEVEL

CEO:

- A. Assume base salary of \$300,000
- B. Cash bonus target = Base salary x 40% = \$120,000
- C. RSI grant in dollars = Base salary x 75% = \$225,000
- D. RSI grant vests on time basis = \$225,000 x .4 = \$90,000
- E. RSI grant at risk = \$225,000 x .6 = \$135,000
- F. Total Compensation Package = A + B + C = \$645,000
- G. At Risk Element of Compensation = B + E = \$255,000
- At Risk portion of Total Compensation = G/F = 39.5%

C00

- A. Assume base salary of \$250,000
- B. Cash bonus target = Base salary x 35% = \$87,500
- C. RSI grant in dollars = Base salary x 60% = \$150,000
- D. RSI grant vests on time basis = \$150,000 x .4 = \$60,000
- E. RSI grant at risk = \$150,000 x .6 = \$90,000
- F. Total Compensation Package = A + B + C = \$487,500
- G. At Risk Element of Compensation = B + E = \$177,500
- At Risk portion of Total Compensation = G/F = 36.4%

Senior VP

- A. Assume base salary of \$210,000
- B. Cash bonus target = Base salary x 30% = \$63,000
- C. RSI grant in dollars = Base salary x 50% = \$105,000
- D. RSI grant vests on time basis = \$105,000 x .4 = \$42,000
- E. RSI grant at risk = \$105,000 x .6 = \$63,000
- F. Total Compensation Package = A + B + C = \$378,000
- G. At Risk Element of Compensation = B + E = \$126,000
- At Risk portion of Total Compensation = G/F = 33.3%

VP

- A. Assume base salary of \$200,000
- B. Cash bonus target = Base salary x 30% = \$60,000
- C. RSI grant in dollars = Base salary x 45% = \$90,000
- D. RSI grant vests on time basis = \$90,000 x .4 = \$36,000
- E. RSI grant at risk = \$90,000 x .6 = \$54,000
- F. Total Compensation Package = A + B + C = \$350,000
- G. At Risk Element of Compensation = B + E = \$114,000
- At Risk portion of Total Compensation = G/F = 32.6%

Senior Director

- A. Assume base salary of \$150,000
  - B. Cash bonus target = Base salary x 25% = \$37,500
  - C. RSI grant in dollars = Base salary x 30% = \$45,000
  - D. RSI grant vests on time basis = \$45,000 x .4 = \$18,000
  - E. RSI grant at risk = \$45,000 x .6 = \$27,000
  - F. Total Compensation Package = A + B + C = \$232,500
  - G. At Risk Element of Compensation = B + E = \$64,500
- At Risk portion of Total Compensation = G/F = 27.7%

Director

- A. Assume base salary of \$120,000
  - B. Cash bonus target = Base salary x 20% = \$24,000
  - C. RSI grant in dollars = Base salary x 25% = \$30,000
  - D. RSI grant vests on time basis = \$30,000 x .4 = \$12,000
  - E. RSI grant at risk = \$30,000 x .6 = \$18,000
  - F. Total Compensation Package = A + B + C = \$174,000
  - G. At Risk Element of Compensation = B + E = \$42,000
- At Risk portion of Total Compensation = G/F = 21.4%

Exhibit 3

SAMPLE CALCULATION FOR ANNUAL INCOME

Assume a director-level employee has a \$150,000 base salary and the stock price is \$2.00 at the beginning and end of the period.

Cash Salary Base \$150,000  
Cash bonus target is 15% = \$22,500  
RSI target is 25% = \$37,500 = 18,750 shares

Example 1

Assume at the end of year 1 that Aastrom has sufficient cash at the end of the year to meet its Affordability Target, and has met 70% of its Corporate Objectives Assume the employee met 100% of his or her personal objectives.

The employee would receive:

1. A RSI grant at the end of the year of:
  - a. 7,500 shares (40% of 18,750 shares as a result of the passage of a year since grant).
  - b. 3,938 RSI grant as a result of the Company meeting its objectives (18,750 shares x .3 x .7).
  - c. 5,625 RSI grant as result of the employee meeting his or her objectives (18,750 shares x .3 x 1.00).
2. A cash bonus of \$15,750 ( $\$22,500 \times .7 \times 1.00$ ).

The RSI grant of 17,063 would vest pro rata on each of the next four anniversaries of the grant date if the employee is still employed.

Example 2

Assume Aastrom misses its financial Affordability Target and met 50% of its Corporate Objectives. The employee met 100% of his Personal Performance Objectives.

The employee would receive:

1. A RSI grant at the end of the year of:
  - a. 7,500 RSI shares as a result of the passage of a year since targets were set.
  - b. 2,813 RSI shares as a result of the Company meeting 50% of its objectives (18,750 shares x .3 x .5).
  - c. 5,625 RSI shares as a result of the Individual meeting his or her Personal Performance Objectives.
2. There would be no cash bonus.

Exhibit 4

AASTROM BIOSCIENCES, INC.  
EMPLOYEE RESTRICTED STOCK GRANT PROGRAM

I. DEFINITIONS

A. FAIR MARKET VALUE ["FMV"] -

The 4 0'clock closing price per share on the principal exchange on which the Company's Common Stock is traded on the [10th] trading day preceding the Board meeting and/or Grant Date.

B. POSITION LEVEL PERCENTAGE ["POSITION%"] -

The percentage of an employee's base salary value used to determine the dollar value level of the Total Eligible Grant [see Table I.].

C. TOTAL ELIGIBLE GRANT - ["ELIGIBLE GRANT"] -

The maximum grant of Restricted Stock Shares for which an employee is eligible.

$$\text{ELIGIBLE GRANT} = \text{POSITION\% Times BASE SALARY} \\ \text{Divided by FAIR MARKET VALUE}$$

D. BASE STOCK AWARD COMPONENT SHARES ["BASE SHARES"] -

Forty [40] Percent of the Eligible Grant.

E. COMPANY PERFORMANCE COMPONENT SHARES ["CO. PERFORMANCE SHARES"] -

Up to Thirty [30] Percent (as determined by the Compensation Committee for officers and by Board of Directors for non-officers) of the Eligible Grant.

F. INDIVIDUAL EMPLOYEE PERFORMANCE COMPONENT SHARES ["EMP. PERFORMANCE SHARES"] -

Up to Thirty [30] Percent [as determined by Compensation Committee (for officers) or management (for non-officers)] of the Eligible Grant.

G. TOTAL GRANT AWARD -

The actual number of Restricted Stock Shares to be awarded to the employee determined following assessment of appropriate performance criteria.

$$\text{TOTAL GRANT AWARD} = \text{BASE SHARES plus CO. PERFORMANCE SHARES} \\ \text{plus EMP. PERFORMANCE SHARES}$$

(Note: once the stock grant is awarded, all of the shares remain subject to vesting over the next four years, in equal annual increments while the employee's employment continues.)

## H. EXAMPLE CALCULATION

### a. Data

Salary: \$200,000      Position% : 50%      FMV: \$2  
Co. Performance: 20%    Emp. Performance: 25%

### b. Calculations

Total Eligible Grant =  $[200,000][0.5] / 2 = 50,000$  shares

Total Grant Award =  $[50,000 \times 0.4] + [50,000 \times 0.2] +$   
 $[50,000 \times 0.25] = 42,500$  shares

## II. GRANT CATEGORIES

### A. INITIAL GRANTS

1. All employees will receive an Initial Restricted Stock Grant when joining the Company. The grant will generally be made at the next meeting of the Compensation Committee, or in the case of newly appointed officers, at the next Board Meeting [or consent action] following the employee's date of hire.
2. In certain circumstances the grant may be pre-approved by the Compensation Committee or Board for an employee and be made on the employees first date of employment.
3. The size of the Initial Grant will equal the BASE SHARES as defined above (Exhibit 4IG).
4. The general vesting schedule for the grant will be four years, with 25% vesting after one year and the remainder of the grant vesting on an annual schedule over the remaining three years. The Compensation Committee may elect to alter this schedule for certain grants.
5. For employees starting during the 1-3 quarters of a year, the Base Share level will be prorated to time (months) remaining in the year. For employees starting in the last quarter of the year, their Initial Grant will be moved to the date of the Annual Grant awards for existing employees.

### B. ANNUAL GRANTS

Annual grants will be awarded equal to the TOTAL GRANT AWARD as defined above (Exhibit 4IG). It is intended that all Annual Grants will be awarded at the start of the fiscal year for all employees. The grant shares will be subject to annual vesting over the four years following the date of the grant. For an employee that has worked less than a full year at the end of the year for which the Annual Grant is being calculated their grant will be prorated. If the employee began in the first quarter of the fiscal year they would receive 100% of the normal grant, in the second quarter they would receive 75% of the normal grant in the third quarter 50% of the normal grant and in the fourth quarter 25% of the normal grant.

## C. BONUS GRANTS

Restricted Stock grants may also be used as a bonus award for an employee. In these occasional cases, the Compensation Committee will determine the appropriate amount and term (with input and guidance from management for non-officer awards). Bonus awards are generally used to reflect an individual's exceptional performance or events that have moved the Company forward in a material way, as well as to recognize other situations when the Compensation committee feels an additional grant is merited for an employee. Bonus Grants will not be included for determination of the size for an Annual Grant. The shares granted will be subject to annual vesting over the four years following the date of the grant.

## D. APPROVAL FOR PERFORMANCE GRANTS

In order to comply with Internal Revenue Code Section 162(m), with respect to any Annual Grant or Bonus Grant to be given to one of the Company's top five officers, if the grant is or was based upon performance criteria, then the grant needs to be approved and awarded by the Company's Compensation Committee (rather than by the Board of Directors) and the performance criteria must be established within the first 90 days of the performance year, and the performance criteria must be one or more of the performance goals criteria listed in the Company's 2004 Equity Incentive Plan.

## II. DESCRIPTION OF RESTRICTED STOCK

### A. NATURE OF OWNERSHIP

1. Shares granted are fully registered
2. Shares are deemed outstanding upon Grant; and those held by officers, directors, and employees are included for reporting "inside ownership".
3. Shares are entitled to the same rights [Voting, Dividends, Communications, etc.] as other shares; except there is no right of sale or transfer, which right arises only upon the vesting of such shares.
4. Custody of restricted shares retained by Company Secretary, in escrow, until vested.
5. Vesting occurs annually for 4 years [annual is administratively preferable, due to taxation as explained below], with 25% vested on the first anniversary of grant date, and 25% on the second, third and fourth anniversaries, so long as employment continues.
6. Shares are issued pursuant to a customary Restricted Stock Agreement, and Notice of Grant of Restricted Stock, and Assignment Separated from Certificate. Pursuant to this documentation, which is signed by the employee, the issued shares vest annually over four years, and the unvested shares are held in escrow; and upon termination of employment any unvested shares are cancelled.

## B. TAXATION UPON VESTING

Taxable Value = Number of shares vested times market price at vesting date.  
Also, the tax basis is set at that same price for determining taxable gain/loss at disposition.

Two options for employee:

1. At time of vesting, employee has this income included as W-2 compensation, and employee pays cash for his or her tax rate times the taxable income value of the vested shares, or;
2. At the time of vesting, the employee surrenders an amount of shares equal to the lesser of his or her withholding tax rate, or 28%, times the number of shares. The employee may elect to have additional shares withheld if his or her actual rate is higher than the 28% level, in order to cover all tax expense. This option means that no cash tax payments will be required by the employee.

[It should be noted that, in lieu of the foregoing arrangement for the employee to be taxed on the value of the vested shares as they become vested, the employee has the right to elect to be taxed earlier, at the date of the grant, at the value of the shares as of the date of the grant, by filing a Section 83(b) election with the IRS within 30 days after the date of the grant. Most employees do not make this election, since it results in an earlier payment of tax, and since there is no tax rebate if the shares never become vested. A Section 83(b) election might be considered only if there is a high probability that the stock value will increase significantly and that employment will continue over the four-year vesting period.]

## C. MECHANICS OF TAX WITHHOLDING ON VESTING OF RESTRICTED STOCK.

For option B2 above, the employee-vestee will surrender [in effect, sell back to the Company] the number of shares vested multiplied by his or her withholding rate, up to a maximum of 28%. The Company then pays the IRS the monetary value of those shares at the market price at close on the day vesting occurs. Such surrender then increases the amount of shares available to be issued under our Plan, as the shares thusly surrendered disappear. This is because under Michigan law, there is no such thing as "Treasury or Reacquired Stock."

The SEC reporting DOES show up, but as a surrender of shares to satisfy taxes on amount vested [separate "reporting code" and footnote on Form 4]. According to our research, in other companies this has NOT been regarded as insiders selling and is a non-event. Furthermore, since annual vesting will occur on our normal grant date, the Company will be also reporting another grant of restricted stock, which under our program will result in a net increase in the employee's holding position.

If the Company did not offer this avenue for withholding, then the employee-vestee would have to sell the shares in the open market, which would be reported as a straight sale.

There are no additional expense accounting issues, as the expense has already been recognized.

D. SUBSEQUENT SEC REPORTING

1. Upon Grant, a Form 4 must be filed within 2 days for officers, directors, and other Control Persons [such as 10% owners].
2. Upon sale or disposition of Vested Shares, all insider trading rules apply to those covered by such.

## EMPLOYMENT AGREEMENT

This Employment Agreement (the "Agreement") is entered into as of June 10, 2005, by and between AASTROM BIOSCIENCES, INC., a Michigan corporation ("Employer"), and Gerald D. Brennan Jr. ("Employee").

## RECITALS

1. Employer desires to employ Employee on the terms and conditions set forth in this Agreement.
2. Employee desires to be employed by Employer on the terms and conditions set forth in this Agreement.

## AGREEMENTS

1. DEFINITIONS. As used in this Agreement, the following terms shall have the following meanings:

"Acquiring Corporation" shall mean the surviving, successor or purchasing corporation or parent corporation thereof, in a Change in Control, as the case may be.

"Cause" means the occurrence of any of the following events, as determined by the Board of Directors of Employer, in good faith:

(i) Employee's theft, material act of dishonesty or fraud, or intentional falsification of any records of Employer;

(ii) Employee's breach of the Aastrom Biosciences, Inc. Employee Proprietary Information and Invention Agreement or any other agreement with the Employer covering the use or disclosure of confidential or proprietary information of Employer, the ownership of intellectual property or restrictions on competition;

(iii) Employee's gross negligence or willful misconduct in the performance of Employee's assigned duties (but not mere unsatisfactory performance); or

(iv) Employee's conviction (including any plea of guilty or nolo contendere) of a crime causing material harm to the reputation or standing of Employer or which materially impairs Employee's ability to perform his duties for Employer.

"Change in Control" shall mean the occurrence of any of the following:

(i) any "person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")), other than a trustee or other fiduciary holding securities of Employer under an employee benefit plan of Employer, becomes the "beneficial owner" (as defined in Rule 13d-3 promulgated under the Exchange Act), directly or indirectly, of securities of Employer representing 50% or more of (A) the outstanding

shares of common stock of Employer or (B) the combined voting power of Employer's then-outstanding securities;

(ii) Employer is party to a merger or consolidation which results in the holders of voting securities of Employer outstanding immediately prior thereto failing to continue to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) at least 50% of the combined voting power of the voting securities of Employer or such surviving entity outstanding immediately after such merger or consolidation; or

(iii) the sale or disposition of all or substantially all of Employer's assets (or consummation of any transaction having similar effect).

"Disability" means that:

(i) Employee has been incapacitated by bodily injury, illness or disease so as to be prevented thereby from effectively performing Employee's duties;

(ii) Such incapacity shall have continued for a period of six (6) consecutive months; and

(iii) Such incapacity will, in the opinion of a qualified physician, be long-term, which shall mean a period exceeding twelve (12) months.

"Employee" means Gerald D. Brennan Jr..

"Employer" means Aastrom Biosciences, Inc., a Michigan corporation, and, following a Change in Control, any Successor that agrees to assume all of the terms and provisions of this Agreement, or a Successor which otherwise becomes bound by operation of law to this Agreement.

"Good Reason" means the occurrence of any of the following conditions following a Change in Control, without Employee's informed written consent, which condition(s) remain(s) in effect ten (10) days after written notice to Employer from Employee of such condition(s):

(i) assignment of Employee to responsibilities or duties that are not a Substantive Functional Equivalent of the position which Employee occupied prior to the Change in Control;

(ii) any decrease in Employee's base salary or target bonus amount (subject to applicable performance requirements with respect to the actual amount of bonus compensation earned by Employee);

(iii) any failure by Employer to (A) continue to provide Employee with the opportunity to participate, on terms no less favorable than those in effect for the benefit of any employee group which customarily includes a person holding the employment position or a comparable position with Employer then held by Employee, in any benefit or compensation plans and programs, including, but not limited to, Employer's life, disability, health, dental, medical, savings,

profit sharing, stock purchase and retirement plans, if any, in which Employee was participating immediately prior to the date of the Change in Control, or their equivalent, or (B) provide Employee with all other fringe benefits (or their equivalent) from time to time in effect for the benefit of any employee group which customarily includes a person holding the employment position or a comparable position with Employer then held by Employee;

(iv) the relocation of Employee's work place for Employer to a location more than 50 miles from the location of the work place prior to the Change in Control, or the imposition of travel requirements substantially more demanding of Employee than such travel requirements existing immediately prior to the Change in Control; or

(v) any material breach of this Agreement by Employer.

"Relocation Costs" shall mean the following actual out-of-pocket costs incurred by the Employee:

(i) Coach class airfare for Employee's family to move from Arlington Heights, Illinois to Ann Arbor, Michigan, or, in the alternative, reimbursement of reasonable automobile operating costs (gas, tolls, etc.), not to exceed the current IRS permitted per mile allowances, for up to two automobiles required to move the Employee's family.

(ii) Cost for packing, shipping, and unloading personal household furnishings and belongings from Employee's prior residence to a new residence in Ann Arbor, Michigan, including temporary storage as needed.

(iii) Shipment of one personal vehicle from Arlington Heights, Illinois to Ann Arbor, Michigan, via common carrier.

(iv) All real estate sales commissions paid by Employee on the sale of a current residence in Arlington Heights, Illinois ("Current Residence"), up to 6% of the gross selling price.

(v) Normal and reasonable closing costs incurred by Employee in connection with the sale of a Current Residence if typically paid by the seller. Closing costs shall be defined as transfer taxes, documentary stamp taxes, title insurance premiums, recording charges, appraisals, inspections, attorneys fees, escrow fees and such other normal and reasonable closing costs as are specifically approved by the Chairman and Chief Executive Officer of Employer. Closing Costs shall not include payments required at closing for real property taxes or assessments, or proration of utilities or other prepaid expenses.

(vi) The aggregate of all of the above-described costs shall not exceed sixty thousand dollars (\$60,000) without prior written agreement of Employer.

"Substantive Functional Equivalent" means an employment position occupied by Employee after a Change in Control that:

(i) is in a substantive area of competence consistent with Employee's experience and not materially different from the position occupied by Employee prior to the Change in Control;

(ii) requires Employee to serve in a role and perform duties that are functionally equivalent to those performed prior to the Change in Control (such as, executive officer);

(iii) carries a title that does not connote a lesser rank or corporate role than the title held by Employee prior to the Change in Control; and

(iv) does not otherwise constitute a material, adverse change in Employee's responsibilities or duties, as measured against Employee's responsibilities or duties prior to the Change in Control, causing it to be of materially lesser rank or responsibility.

"Successor" means Employer and any successor or assign to substantially all of its business and/or assets.

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

3. DUTIES. Employee is engaged as Vice President, Administrative and Financial 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. 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.

#### 4. COMPENSATION AND FRINGE BENEFITS.

4.1 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 to Employee a salary of two hundred twelve thousand five hundred dollars (\$212,500) per year ("Base Salary"), payable in arrears in equal 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.

4.2 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.

4.3 VACATION. Employee is entitled to twenty days of vacation in each calendar year.

4.4 ACCUMULATION. Employee shall earn and accumulate unused vacation and sick leave in accordance with the Company's policy in effect from time to time. Further, Employee shall not be entitled to receive payments in lieu of Fringe Benefits, other than for unused vacation leave earned and accumulated at the time the employment relationship terminates.

#### 4.5 RELOCATION COSTS.

4.5.1 Temporary Living Allowance. Employee agrees to relocate Employee's principal domestic residence to within fifty (50) miles of Ann Arbor, Michigan, by December 31, 2005. For so long as Employee maintains Employee's principal domestic residence in Arlington Heights, Illinois, but in no event later than December 31, 2005, Employer will reimburse Employee for the following costs:

(i) Employee's actual out-of-pocket housing and related costs (including rent, insurance, utilities, local telephone service, laundry) in Ann Arbor, Michigan, in an aggregate amount of not more than two thousand dollars (\$2,000) per calendar month.

(ii) Employee's actual out-of-pocket costs for round trip coach airfare travel from Ann Arbor, Michigan, to, Chicago, Illinois up to one such trip per calendar week. Employee shall use reasonable best efforts to obtain the most economical fares available for such trips.

4.5.2 Relocation Costs. Employer shall reimburse Employee for the Relocation Costs. The Employee shall be required to refund and pay to Employer 100% of the Relocation Costs that have been paid by the Employer on the following terms:

(i) If Employee's employment with Employer ceases within 18 months after Employee commences full-time employment with Employer (the "Commencement Date"), due to the Employee voluntarily electing to leave the employ of Employer, or Employer terminating the Employee for Cause, Employee hereby agrees to refund and pay to Employer 100% of the Relocation Costs that have been paid by Employer.

(ii) If Employer elects to terminate the employment of Employee without Cause, then Employee shall have no obligation to refund any of the Relocation Costs. If Employee's employment terminates due to Employee's death or disability, then Employee shall have no obligation to refund any of the Relocation Costs.

(iii) With respect to any of the Relocation Costs which Employee does become obligated to refund to Employer, as specified above, said refund shall be made within six months after the termination of employment. Any portion of the Relocation Costs which are obligated to be refunded by Employee, and which are not refunded within said six (6) months, shall thereafter bear a late payment charge of 10% per annum.

#### 5. TERM.

5.1 COMMENCEMENT. The employment relationship pursuant to this Agreement shall commence at a date to be designated by mutual agreement of the Employer and Employee, but in any event such date shall not be later than July 2, 2005.

5.2 TERMINATION AT WILL. Employer and Employee acknowledge and agree that Employer's employment currently is "at will" and that their employment relationship may be terminated by either party at any time, with or without Cause.

#### 6. PAYMENTS UPON TERMINATION.

6.1 PAYMENT OF COMPENSATION UPON TERMINATION. Upon termination of Employee's employment with the Company, Employee shall be entitled to be paid salary as provided in Section 4.1 through the effective date of such termination, as full compensation for any and all claims of Employee under this Agreement or otherwise, except as set forth in Section 6.2.

#### 6.2 PAYMENT OF SEVERANCE UPON TERMINATION.

6.2.1 Severance. In the event Employee's employment is terminated by Employer without Cause, or in the event of Employee's termination of employment for Good Reason within twelve (12) months following a Change in Control, then Employer shall pay to Employee severance payment equal to six months of Employee's then current annual salary rate, less customary payroll deductions. The severance payment shall be paid in equal installments over six months in accordance with the Employer's normal payroll periods, except that severance payments due following a Change in Control shall be paid in a lump sum immediately following the Change in Control.

6.2.2 Continued Medical Coverage. In the event Employee's employment is terminated, then Employee shall be entitled to elect continued medical insurance coverage in accordance with applicable provisions of the Consolidated Budget Reconciliation Act of 1985 ("COBRA").

6.2.3 Right to Terminate. Employer retains and reserves the right to terminate the employment of Employee at any time, with or without Cause. For avoidance of doubt, said severance payment shall not be owed if Employee's termination is for Cause, if Employee voluntarily terminates employment for reasons other than as specified in Section 6.2.1 hereof or if Employee's employment terminates as a result of Employee's death or disability.

6.2.4 No Liability. No director, officer or shareholder of Employer shall have any personal liability for the payment of any severance to Employee.

6.3 RESIGNATION. Employee's entitlement to any compensation or benefits under this Section 6 (other than compensation and benefits earned by Employee through the date of Employee's termination of employment) is conditioned upon Employee's resignation from all capacities in which Employee is then rendering services to Employer, including from the Board of Directors and any committees thereof on which Employee serves.

6.4 EXCLUSIVE REMEDY. The parties acknowledge and agree that the payments specified herein constitute Employee's sole and exclusive remedy for any alleged injury or other damages arising out of a termination of Employee's employment under circumstances described herein. Accordingly, as a condition to receipt of said payments, Employee shall sign a customary and reasonable release form, in the form attached hereto as Exhibit A, pursuant to which Employee acknowledges and agrees that Employee has no claims against Employer or any director,

officer, shareholder or agent of Employer, or any successor in interest to Employer, with respect to any employment matters or termination of employment (excepting only for accrued salary, accrued vacation leave and reimbursement of customary business expenses incurred on behalf of Employer, all in the ordinary course of business, or any incentive sale bonus to which Employee may be entitled, if any).

## 7. GENERAL PROVISIONS.

7.1 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.

7.2 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. However, the noncumulation of benefits provision of Section 7.6 shall apply to any subsequent agreement, unless (i) such provision is explicitly disclaimed in the subsequent agreement, and (ii) the subsequent agreement has been authorized by the Board of Directors of the Employer or a committee thereof.

7.3 ENTIRE AGREEMENT. This Agreement constitutes the entire agreement between the parties with respect to the employment of Employee, other than relating to the Employer's stock option grants to Employee, the Employer's inventions, trade secrets, and proprietary and confidential information, competition with the Employer and solicitation of the Employer's employees. This Agreement supersedes all prior agreements, understandings, negotiations and representation with respect to the employment relationship.

7.4 SUCCESSORS AND ASSIGNS. This Agreement shall inure to the benefit of and be enforceable by the Employee's personal and legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

7.5 NO LIMITATION OF REGULAR BENEFIT PLANS. This Agreement is not intended to and shall not affect, limit or terminate any plans, programs, or arrangements of Employer that are regularly made available to a significant number of employees or officers of the Employer, including without limitation Employer's stock option plans.

7.6 NONCUMULATION OF BENEFITS. Employee may not cumulate cash severance payments under both this Agreement and another agreement. If Employee has any other binding written agreement with Employer which provides that, upon a Change in Control or termination of employment, Employee shall receive one or more of the benefits described in Sections 6 of this Agreement (i.e., the payment of cash compensation), then with respect to those benefits the aggregate amounts payable under this Agreement shall be reduced by the amounts paid or payable under such other agreements.

7.7 NO ASSIGNMENT OF BENEFITS. The rights of any person to payments or benefits under this Agreement shall not be made subject to option or assignment, either by voluntary or involuntary assignment or by operation of law, including (without limitation) bankruptcy, garnishment, attachment or other creditors process, and any action in violation of this Section 7.7 shall be void.

7.8 NOTICES. Notices and all other communications contemplated by this Agreement shall be in writing and shall be deemed to have been duly given when personally delivered, when mailed, if mailed by U.S. registered or certified mail, return receipt requested and postage prepaid, or when shipped, if shipped by nationally known reputable overnight delivery service and shipping charges prepaid. In the case of Employee, notices shall be addressed to Employee at the home address which he most recently communicated to the Employer, in writing. In the case of the Employer, notices shall be addressed to its corporate headquarters, and all notices shall be directed to the attention of its Secretary.

7.9 NO DUTY TO MITIGATE. Employee shall not be required to mitigate the amount of any payment contemplated by this Agreement (whether by seeking employment with a new employer or in any other manner), nor shall any such payment be reduced by any earnings that Employee may receive from any other source except as otherwise provided herein.

7.10 NO REPRESENTATIONS. Employee acknowledges that in entering into this Agreement Employee is not relying and has not relied on any promise, representation or statement made by or on behalf of the Employer which is not set forth in this Agreement.

7.11 CHOICE OF LAW. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the State of Michigan, without regard to its choice of law rules.

7.12 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.

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

7.14 TAX WITHHOLDING. The payments to be made pursuant to this Agreement will be subject to customary withholding of applicable income and employment taxes.

7.15 CONSULTATION. Employee acknowledges that this Agreement confers significant legal rights on Employee, and also involves Employee waiving other potential rights he might have under other agreements and laws. Employee acknowledges that Employer has encouraged Employee to consult with Employee's own legal, tax, and financial advisers before signing the Agreement; and that Employee has had adequate time to do so before signing this Agreement.

7.16 COUNTERPARTS. This Agreement may be executed in counterparts, and each of which shall be deemed an original, but all of which together will constitute one and the same instrument.

7.17 EXCESS PARACHUTE PAYMENT. In the event that any payment or benefit received or to be received by Employee pursuant to this Agreement or otherwise would subject Employee to

due to the characterization of such payment or benefit as an excess parachute payment under Section 280G of the Code, Employee may elect in his sole discretion to reduce the amounts of any payments or benefits otherwise called for under this Agreement in order to avoid such characterization.

#### 7.18 CLAIMS PROCEDURE FOR SEVERANCE PAYMENTS.

7.18.5 Administrator. The administrator for purposes of the severance payments provided by Section 6.2 of this Agreement shall be the Employer ("Administrator"), whose address is 24 Frank Lloyd Wright Dr., P.O. Box 376, Ann Arbor, Michigan 48106, and whose telephone number is 734-930-5555. The "Named Fiduciary" as defined in Section 402(a)(2) of ERISA, also shall be the Employer. The Employer shall have the right to designate one or more employees as the Administrator and the Named Fiduciary at any time, and to change the address and telephone number of the same. The Employer shall give the Employee written notice of any change in the Administrator and Named Fiduciary, or in the address or telephone number of the same.

7.18.6 Claims. The Administrator shall make all determinations as to the right of any person to receive benefits under this Agreement. Any denial by the Administrator of a claim for benefits by the Employee ("the claimant") shall be stated in writing by the Administrator and delivered or mailed to the claimant within ten (10) days after receipt of the claim, unless special circumstances require an extension of time for processing the claim. If such an extension is required, written notice of the extension shall be furnished to the claimant prior to the termination of the initial 10-day period. In no event shall such extension exceed a period of ten (10) days from the end of the initial period. Any notice of denial shall set forth the specific reasons for the denial, specific reference to pertinent provisions of this Agreement upon which the denial is based, a description of any additional material or information necessary for the claimant to perfect the claim, with an explanation of why such material or information is necessary, and any explanation of claim review procedures, and the time limits applicable to such procedures, including a statement of the claimant's right to bring a civil action under ERISA Section 502(a) after exhausting all levels of appeal provided herein, written to the best of the Administrator's ability in a manner that may be understood without legal or actuarial counsel.

7.18.7 Review of Claim Denial. A claimant whose claim for benefits has been wholly or partially denied by the Administrator may request, within sixty (60) days following the date of such denial, in a writing addressed to the Administrator, a review of such denial. The claimant shall be entitled to submit such issues or comments in writing or otherwise, as the claimant shall consider relevant to a determination of the claim, and the claimant may include a request for a hearing in person before the Administrator. Prior to submitting the request, the claimant shall be entitled to review such documents as are relevant to the claim. The claimant may, at all stages of review, be represented by counsel, legal or otherwise, of the claimant's choice. All requests for review shall be promptly resolved. The Administrator's decision with respect to any such review shall be set forth in writing and shall be mailed to the claimant not later than ten (10) days following receipt by the Administrator of the claimant's request unless special circumstances, such as the need to hold a hearing, require an extension of time for processing, in which case the Administrator's decision shall be so mailed not later than twenty (20) days after receipt of such request.

7.18.8 Arbitration. A claimant who has followed the procedure in paragraphs 7.18.2 and 7.18.3 of this Section, but who has not obtained full relief on the claim for benefits, may, within sixty (60) days following the claimant's receipt of the Administrator's written decision on review, apply in writing to the Administrator for arbitration of the claim as provided in Section 7.19.

#### 7.19 ARBITRATION.

(a) Either party to this Agreement, after complying with the requirements of Section 7.18, to the extent applicable, may submit any dispute under this Agreement for binding arbitration of the dispute before an arbitrator mutually acceptable to both parties, the arbitration to be held in Ann Arbor, Michigan, in accordance with the arbitration rules of the American Arbitration Association, as then in effect, and the rights of claimant under Section 7.18. If the parties are unable to mutually agree upon an arbitrator, then the arbitration proceedings shall be held before three arbitrators, one of which shall be designated by the Employer, one of which shall be designated by the claimant and the third of which shall be designated mutually by the first two arbitrators in accordance with the arbitration rules referenced above. The arbitrator(s) sole authority shall be to interpret and apply the provisions of this Agreement; the arbitrator(s) shall not change, add to, or subtract from, any of the Agreement's provisions. The arbitrator(s) shall have the power to compel attendance of witnesses at the hearing. Any court having jurisdiction may enter a judgment based upon such arbitration. Except as set forth in Section 7.18, the decision of the arbitrator(s) shall be final and binding on the parties to this Agreement and without appeal to any court. Except as set forth in Section 7.18, upon execution of this Agreement, the Employee shall be deemed to have waived any right to commence litigation proceedings regarding this Agreement outside of arbitration without the express written consent of the Employer.

(b) In the case of a dispute relating to severance payments provided by Section 6.2, the decision of the arbitrator(s) shall be delivered or mailed to the claimant within sixty (60) days of the claimant's initial request for review of the denied claim under Section 7.18 unless special circumstances require an extension of time. If an extension is needed the arbitrator(s) shall, before the end of the sixty (60) day period, give to the claimant written notice of the special circumstances requiring the extension and the date by which the arbitrator(s) expect(s) to render a decision. The extension of time shall not exceed sixty (60) days from the end of the initial sixty (60) day period. Notwithstanding the provisions of Section 7.19(b), in the case of a dispute relating to severance payments provided by Section 6.2, the claimant shall not be precluded from challenging the arbitrator's decision under Section 502(a) of ERISA.

7.20 ERISA. The severance compensation provided by Section 6.2 of this Agreement constitutes an unfunded compensation arrangement for a member of a select group of the Employer's management and any exemptions under ERISA, as applicable to such an arrangement, shall be applicable to this Agreement. Section 7.18, Section 7.19(b) and Section 7.20 apply to the severance compensation provided by Section 6.2 of this Agreement.

7.21 REPORTING AND DISCLOSURE. The Employer, from time to time, shall provide government agencies with such reports concerning this Agreement as may be required by law, and the Employer shall provide the Employee with such disclosure concerning this Agreement as may be required by law or as the Employer may deem appropriate.

8. EMPLOYEE'S REPRESENTATIONS. Employee represents and warrants that Employee (i) is free to enter into 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 WHEREOF, the parties have executed this Agreement as of the date set forth above.

EMPLOYER:

Aastrom Biosciences, Inc.

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

Its: \_\_\_\_\_

EMPLOYEE:

\_\_\_\_\_

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

Address: \_\_\_\_\_

\_\_\_\_\_

[AASTRORM BIOSCIENCES INC LOGO]

\_\_\_\_\_ P.O. Box 376 - Ann Arbor. Michigan 40106 - Ph: 734-930-5555 -  
Fax: 734-665-0485  
Located at: Domino's Farms, Lobby L

December 5, 2002

Maria Sippola-Thiele, Ph.D.  
University of Michigan  
Technology Transfer Office  
715 East Huron  
Suite 2 West  
Ann Arbor, MI 48104.

Re: US Patents 5,804,431; 5,654,185; 5,811,274

Dear Maria,

Under the terms of the technology License Agreement ("Agreement") between Aastrom and the University of Michigan (UM), dated 3-13-92, Aastrom must pay a royalty on products sold that are based on the above referenced patents. The royalty can be as much as 2%. The royalty rate was provided in addition to a large amount of Aastrom stock, which UM has already received. The rate also recognized that the research leading to this technology would be funded entirely by Aastrom and largely took place in Aastrom facilities.

The License Agreement allows Aastrom to sublicense rights these patents provided that the UM royalty provision is maintained. The 2% royalty envisioned therapeutic, applications of the technology, where large margins and royalties in the 7 to 10% range are customary. On the other hand, for research products, royalty rates are customarily in the 1 to 4% range.

Aastrom has the opportunity to sublicense the above patents for research applications to Coming However, under this proposed agreement, only a 3.5% royalty will be provided for certain sales of research product. Aastrom would like to move forward with this sublicense agreement, but request that UM adjust the 2% royalty payable to UM in the following way for a research product sublicense.

The following language would be used as an amendment to the Aastrom-UM Agreement for the above referenced patents;

"Aastrom Biosciences, Inc. (Aastrom) and the University of Michigan (UM) agree to this amendment of the Technology License Agreement (Agreement) dated 3-13-92, such that the royalty to be paid to UM resulting from the sublicense for research products of US patents 5,804,431; 5,654,185; and 5,811,274, will either be the 2% royalty as described in the Agreement, or an amount equal to 35% of the royalty payments received by Aastrom, whichever is less."

AASTROM BIOSCIENCES, INC.

Maria Sippola-Thiele  
December 5, 2002  
Page 2

If these terms are acceptable to the University of Michigan, then please so indicate below, and return one copy of this letter.

Thank you.

Sincerely,

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

cc: Knox Bell, Esq. - Gray Cary Ware Friedenrich  
Alan Wright - Aastrom Biosciences, Inc.

UM HEREBY ACCEPTS AND AGREES TO THE REVISED AGREEMENT TERMS STATED ABOVE.

University of Michigan:

/s/ Kenneth J. Nisbet  
-----  
(Signature)

Date: 12/10/02

Kenneth J, Nisbat  
(Name)

Executive Director  
UM Technology Transfer  
(Title)

**SUBSIDIARIES OF REGISTRANT**

Aastrom Biosciences, Ltd.  
Aastrom Biosciences GmbH

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-121006, 333-115505, 333-81340, 333-51556, 333-38886 and 333-25021) and Form S-3 (Nos. 333-123570, 333-108963, 333-108989, 333-108964 and 333-107579) of Aastrom Biosciences, Inc. (a development stage company) of our report dated September 9, 2005, relating to the financial statements, financial statement schedule, management's assessment of the effectiveness of internal control over financial reporting and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

PricewaterhouseCoopers LLP  
Minneapolis, Minnesota  
September 13, 2005

**CERTIFICATION**

I, R. Douglas Armstrong, certify that:

1. I have reviewed this Form 10-K of Aastrom Biosciences, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared; and
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles; and
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: September 9, 2005

*/s/ R. DOUGLAS ARMSTRONG, PH.D.*

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R. Douglas Armstrong, Ph.D.  
*Chief Executive Officer and Chairman*

## CERTIFICATION

I, Gerald D. Brennan, Jr., certify that:

1. I have reviewed this Form 10-K of Aastrom Biosciences, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared; and
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles; and
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: September 9, 2005

/s/ GERALD D. BRENNAN, JR.

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Gerald D. Brennan, Jr.  
*Vice President Administrative and Financial  
Operations and Chief Financial Officer*

**18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Aastrom Biosciences, Inc. (the "Company") on Form 10-K for the year ended June 30, 2005, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, R. Douglas Armstrong, Chief Executive Officer and Chairman of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 ("Section 906"), that:

- (1) The Report fully complies with the requirements of section 13(a) of the Securities Exchange Act of 1934 (15 U.S.C. 78m); and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: September 9, 2005

/s/ R. DOUGLAS ARMSTRONG, PH.D.

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R. Douglas Armstrong, Ph.D.  
*Chief Executive Officer and Chairman*

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**18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Aastrom Biosciences, Inc. (the "Company") on Form 10-K for the year ended June 30, 2005, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Gerald D. Brennan, Jr., Vice President Administrative and Financial Operations and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 ("Section 906"), that:

- (1) The Report fully complies with the requirements of section 13(a) of the Securities Exchange Act of 1934 (15 U.S.C. 78m); and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: September 9, 2005

/s/ GERALD D. BRENNAN, JR.

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Gerald D. Brennan, Jr.  
*Vice President Administrative and Financial  
Operations and Chief Financial Officer*