Filed Pursuant to Rule 424(b)(3)
Registration File Number: 333-160044

PROSPECTUS

AASTROM BIOSCIENCES, INC.

39,872,634 Shares of Common Stock

This prospectus relates to the sale of up to 39,872,634 shares of our common stock by Fusion Capital Fund II, LLC. Fusion Capital is sometimes referred to in this prospectus as the selling shareholder. The prices at which Fusion Capital may sell the shares will be determined by the prevailing market price for the shares or in negotiated transactions. We will not receive proceeds from the sale of our shares by Fusion Capital.

Our common stock is registered under Section 12(b) of the Securities Exchange Act of 1934 and quoted on the Nasdaq Capital Market under the symbol “ASTM.” On June 25, 2009, the last reported sale price for our common stock as reported on the Nasdaq Capital Market was $0.39per share. We have applied to have the shares of common stock offered pursuant to this prospectus approved for listing on the Nasdaq Capital Market.

Investing in the common stock involves certain risks. See “Risk Factors” beginning on page 6 for a discussion of these risks.

The selling shareholder is an “underwriter” within the meaning of the Securities Act of 1933, as amended.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this Prospectus is June 30, 2009.

TABLE OF CONTENTS

You may rely only on the information provided or incorporated by reference in this Prospectus. Neither we nor the selling stockholder have authorized anyone to provide information different from that contained in this Prospectus. Neither the delivery of this Prospectus nor the sale of the securities means that the information contained in this Prospectus is correct after the date of this Prospectus. This Prospectus is not an offer to sell or solicitation to buy the securities in any circumstances under which the offer or solicitation is unlawful.

PROSPECTUS SUMMARY

The following summary highlights information contained elsewhere in this Prospectus. It may not contain all of the information that is important to you. You should read the entire Prospectus carefully, especially the discussion regarding the risks of investing in our common stock under the heading "Risk Factors," before investing in our common stock. In this Prospectus, "Aastrom," "we," "us," and "our" refer to Aastrom Biosciences, Inc.

Business

We are a regenerative medicine company *(a medical area that focuses on developing therapies that regenerate damaged or diseased tissues or organs)* that incorporated in 1989 and focuses on the clinical development of autologous cell products *(cells collected from a patient and returned to that same patient)* for the repair or regeneration of multiple human tissues, based on our proprietary Tissue Repair Cell (TRC) technology. Our preclinical and clinical product development programs utilize patient-derived bone marrow stem and early progenitor cell populations, and are being investigated for their ability to aid in the regeneration of tissues such as cardiac, vascular, bone and neural. TRC-based products have been used in over 325 patients, and are currently in the following stages of development:

- Cardiac regeneration — Cardiac Repair Cells (CRCs):
  - Dilated cardiomyopathy (DCM) (severe chronic disease of the heart):
    - U.S.: IMPACT-DCM Phase II clinical trial began treating patients in November 2008; to date, 15 patients enrolled at five clinical sites (The Methodist Hospital, Houston, TX, Baylor University Medical Center, Dallas, TX, The University of Utah School of Medicine, Salt Lake City, UT, Cleveland Clinic Heart & Vascular Institute, Cleveland, OH, and Emory University Hospital Midtown, Atlanta, GA); Orphan Drug Designation from the FDA for use in treatment of DCM; on May 5, 2009, preliminary findings from the IMPACT-DCM trial were presented at the International Society for Cellular Therapy annual meeting by the study's National Lead Investigator
    - Germany: Encouraging data reported April 2008 from compassionate use treatment in two patients; one patient later died of natural causes unrelated to cell therapy; the second patient maintained a left ventricular ejection fraction (LVEF) of 45% at 7-months follow-up (baseline 25-30%)

- Vascular regeneration — Vascular Repair Cells (VRCs):
  - Critical limb ischemia (CLI):
    - U.S.: RESTORE-CLI Phase IIb clinical trial has enrolled 66 patients to date; interim analysis of 12-month data for the first 30 patients expected to occur during the 4th quarter of calendar year 2009; patient enrollment continues
    - Germany: Phase I/II investigator-sponsored clinical trial completed enrollment and patient follow-up ongoing; positive interim data reported October 2007; investigator report of final data expected during the second quarter of calendar year 2009
- Bone regeneration — Bone Repair Cells (BRCs):
  - Osteonecrosis of the femoral head:
    - U.S.: ON-CORE Phase III clinical trial active; not enrolling additional patients; Orphan Drug Designation from the FDA for use in treatment of osteonecrosis of the femoral head
    - Spain: 7 patients (total of 9 hips) have been treated with 24 month follow-up underway
    - Germany: Encouraging data reported October 2007 from compassionate use treatment cases; follow-up ongoing
  - Non-union fractures:
    - U.S.: Final clinical study report issued in December 2008; TRC product showed an excellent safety profile and the efficacy data indicated a high non-union healing rate, with bridging callus formation rates reported in over 90% of patients 12 months post-surgery compared to 50% historically
    - Spain: Final 24-month follow-up complete for 10-patient investigator-sponsored Phase II clinical trial; the final investigator report indicates that 7 of 10 cases resulted in healing at 24 months
- Neural regeneration — Neural Repair Cells (NRCs):
  - Spinal cord injury:
    - Plans for clinical program on hold

Our platform TRC technology is based on 1) autologous cell products which are a unique cell mixture containing large numbers of stem and early progenitor cells produced outside of the body from a small amount of bone marrow taken from the patient, and 2) the ability to produce these products in an automated process that meets Good Manufacturing Practice (GMP) requirements.

We have developed a manufacturing system to produce human cells for clinical use. This automated cell manufacturing system enables the “single-pass perfusion” cell culture process. Single-pass perfusion is our patented manufacturing technology for growing large numbers of human cells. The cellular components of TRC-based products include adult stem and early progenitor cell populations, which are capable of forming tissues such as cardiac, vascular, bone, neural, and the hematopoietic and immune system.

All TRC-based products are produced using our cell manufacturing system in centralized manufacturing facilities. We have one manufacturing site in the U.S. located in Ann Arbor, MI, and three contract facilities in the EU located in Stuttgart, Germany (Fraunhofer Institute for Interfacial Engineering and Biotechnology), Bad Oeynhausen, Germany (Institute of Laboratory and Transfusion Medicine at the Heart Center) and Barcelona, Spain (Tissue and Cell Therapy Center at the Blood and Tissue Bank).

Since our inception, we have been in the development stage and engaged in research and product development, conducted principally on our own behalf. Our initial business plan was to pursue our targeted markets by commercializing our cell manufacturing system and supplies. Since 2004 we have phased out our marketing efforts promoting the cell manufacturing system as a commercial product. Currently, we have minimal product sales consisting of manufacturing supplies to academic collaborators in the U.S. and cell-based products to EU-based physicians.

Our current focus is on utilizing our TRC technology to produce autologous cell-based products for use in regenerative medicine applications. At such time as we satisfy applicable regulatory approval requirements, we expect the sales of our TRC-based products to 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 significant TRC-based cell product sales commence. Until that time, we expect that our revenue sources from our current activities will consist of only minor sales of our cell products and manufacturing supplies to our academic collaborators, grant revenue, research funding and potential licensing fees or other financial support from potential future corporate collaborators.

In May 2008, we reprioritized our clinical development programs to focus primarily on cardiovascular applications, including dilated cardiomyopathy and critical limb ischemia. We have discontinued further patient enrollment into our Phase III ON-CORE (osteonecrosis) bone regeneration trial. We do not anticipate initiating new clinical bone activity, reactivating the Phase III ON-CORE trial or initiating formal clinical trials in the neural area without additional financial resources. While the decision to reprioritize was driven by economic factors, the clinical programs were prioritized based on anticipated time to market and the perceived relative clinical and market potential. We are also exploring the possibility of entering into complementary regenerative medicine business activities, whether through acquisition or otherwise. In addition to reprioritizing our development and clinical programs, we also made reductions in our staff and reduced our overhead expenses.

We expect that we will need to raise significant additional funds or pursue strategic transactions or other strategic alternatives in order to complete our product development programs, complete clinical trials needed to market our products, and commercialize our products. 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. With respect to our current activities, this is not likely to occur until we obtain significant additional funding, complete the required clinical trials for regulatory approvals, and receive the necessary approvals to market our products. Through March 31, 2009, we have accumulated a net loss of approximately $191 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.

We believe, based on our current projections of cash utilization (which is expected to approximate between $1.2 — $1.4 million per month) available cash and cash equivalents on hand as of May 31, 2009 (which equaled approximately $17.9 million) are adequate to finance our planned operations at least until June 30, 2010. However, we will need to raise a significant amount of additional funds in order to complete our product development programs, complete clinical trials needed to market our products, and commercialize these products. We cannot be certain that such funding will be available on favorable terms, if at all. Some of the factors that will impact our ability to raise additional capital and our overall success include: the rate and degree of progress of our product development, the rate of regulatory approval to proceed with clinical trial programs, the level of success achieved in clinical trials, fulfillment of the requirements for marketing authorization from regulatory bodies in the U.S., EU and other countries, the liquidity and market volatility of our equity securities, regulatory and manufacturing requirements and uncertainties, technological developments by competitors, the U.S. economic conditions regarding the availability of investment capital and other factors. If we cannot raise such funds, we may not be able to develop or enhance products, take advantage of future opportunities, or respond to competitive pressures or unanticipated requirements, which would likely have a material adverse impact on our business, financial condition and results of operations.

Corporate Information

Aastrom is incorporated under the laws of the State of Michigan. Our principal executive offices are located at 24 Frank Lloyd Wright Drive, P.O. Box 376, Ann Arbor, Michigan 48106. Our telephone number is (734) 930-5555. The address of our website is www.aastrom.com. Information on our website is not part of this Prospectus.

Our Common Stock

Our common stock trades on the Nasdaq Capital Market under the symbol "ASTM."

The Offering

On June 12, 2009, we entered into a Common Stock Purchase Agreement with Fusion Capital Fund II, LLC, an Illinois limited liability company. Under the Purchase Agreement, Fusion Capital is obligated, under certain conditions, to purchase shares from us in an aggregate amount of $30.0 million from time to time over a 25-month period. Under the terms of the Purchase Agreement, Fusion Capital has received an initial commitment fee consisting of 1,452,238 shares of our common stock. Also, we will issue to Fusion Capital up to an additional 2,420,396 shares as a commitment fee pro rata as we receive the $30.0 million of future funding. As of June 12, 2009, there were 160,223,219 shares outstanding (159,910,319 shares held by non- affiliates) excluding the 36,000,000 shares being registered under this registration statement that can be sold to Fusion and the 2,420,396 shares of additional commitment shares that Fusion Capital has not yet received from us. If all of such 38,420,396 shares offered hereby were issued and outstanding as of the date hereof, the 38,420,396 shares would represent 19.34% of the total common stock outstanding or 19.37% of the non-affiliates shares outstanding as of the date hereof.

Under the Purchase Agreement and the Registration Rights Agreement we are required to register and have included in the offering pursuant to this Prospectus (1) 1,452,238 shares which have already been issued, (2) an additional 2,420,396 shares which we may issue in the future as a commitment fee pro rata as we receive the $30.0 million of future funding and (3) at least 36,000,000 shares which we may sell to Fusion Capital after this registration statement is declared effective. All 39,872,634 shares are being offered pursuant to this Prospectus. Under the Purchase Agreement, we have the right but not the obligation to sell more than the 36,000,000 shares to Fusion Capital. The number of shares ultimately offered for sale by Fusion Capital is dependent upon the number of shares purchased by Fusion Capital under the Purchase Agreement.

We do not have the right to commence any sales of our shares to Fusion Capital until the SEC has declared effective the registration statement of which this Prospectus is a part. The registration statement was declared effective on June 29, 2009 and the conditions to commence funding have generally been satisfied. Generally, we have the right but not the obligation from time to time to sell our shares to Fusion Capital in amounts between $100,000 and $4.0 million depending on certain conditions. We have the right to control the timing and amount of any sales of our shares to Fusion Capital. The purchase price of the shares will be determined based upon the market price of our shares without any fixed discount at the time of each sale. Fusion Capital shall not have the right nor the obligation to purchase any shares of our common stock on any business day that the price of our common stock is below $0.10.

Additionally, in order to be in compliance with Nasdaq Capital Market rules, we cannot be required to sell, and Fusion Capital shall not have the right or the obligation to purchase, shares of our common at a price below $0.36, which represents the greater of the book value per share of our common stock as of March 31, 2009 or the closing sale price per share of our common stock on June 11, 2009, the business day before we entered into the Purchase Agreement, plus $0.01. If we elect to sell our shares of common stock to Fusion Capital at a price per share below $0.36, we may be required to obtain shareholder approval in order to be in compliance with the Nasdaq Capital Market rules.

There are no negative covenants, restrictions on future fundings, penalties or liquidated damages in the Purchase Agreement or the Registration Rights Agreement. The Purchase Agreement may be terminated by us at any time at our discretion without any cost to us.

RISK FACTORS

You should carefully consider the risks described below before purchasing our common stock. Our most significant risks and uncertainties are described below; however, they are not the only risks we face. If any of the following risks actually occur, our business, financial condition, or results or operations could be materially adversely affected, the business of our common stock could decline, and you may lose all or part of your investment therein. You should acquire shares of our common stock only if you can afford to lose your entire investment.

The risk factors described below are not all inclusive. All risk factors should be considered carefully when evaluating our business, results of operations, and financial position. We undertake no obligation to update forward-looking statements or risk factors. There may be other risks and uncertainties not highlighted herein that may become material factors affecting our financial condition and business operations.

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 March 31, 2009, we have incurred a cumulative net loss totaling approximately $191 million, and we have continued to incur losses since that date. These losses have resulted principally from costs incurred in the research and development of our cell culture technologies and our cell manufacturing system, general and administrative expenses, and the prosecution of patent applications. We expect to continue to incur significant operating losses over the next several years and at least until, and probably after, product sales increase, primarily owing to our research and development programs, including preclinical 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, timely initiation and completion of clinical trials, obtaining regulatory approvals, establishing manufacturing, sales and marketing arrangements with third parties, maintaining supplies of key manufacturing components, acquisition and development of complementary activities and raising sufficient cash to fund our operating activities. In addition, we may not be able to achieve or sustain profitability.

The global economy and capital markets are challenging for the small cap biotech sector. This situation makes the timing and potential for future equity financings uncertain.

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 per share) to maintain the listing of our common stock on the NASDAQ Capital Market. On March 25, 2009, we received notification from the Listings Qualifications Department of NASDAQ that, given the continued extraordinary market conditions, NASDAQ had further suspended enforcement of the rules requiring a minimum $1.00 per share closing bid price and a minimum market value of publicly held shares until July 20, 2009. As a result of NASDAQ further extending the suspension and the balance of 60 days remaining on our pending compliance period at the time of the initial suspension, we now have until September 18, 2009 to regain compliance with the $1.00 minimum closing bid price rule in order to remain listed on the NASDAQ Capital Market. We can regain compliance with the minimum closing bid price rule if the bid price of our common stock closes at $1.00 per share or higher for a minimum of ten consecutive business days during the 180-day compliance period, although NASDAQ may, in its discretion, require us to maintain a minimum closing bid price of at least $1.00 per share for a period in excess of ten consecutive business days (but generally no more than 20 consecutive business days) before determining that we have demonstrated the ability to maintain long-term compliance. If we do not regain compliance during the further extended compliance period, NASDAQ will provide written notice that our securities will be delisted from the NASDAQ Capital Market. At such time, we would be able to appeal the delisting determination to a NASDAQ Listing Qualifications Panel.

We cannot provide any assurance that our stock price will recover within the permitted grace period or that we would otherwise regain compliance. 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 may also impair our ability to raise capital.

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

In addition to our financing with Fusion, we will require substantial additional capital resources in order to conduct our operations and develop and commercialize our products and cell manufacturing facilities. In order to grow and expand our business, to introduce our new product candidates into the marketplace and to acquire or develop complementary business activities, we will need to raise a significant amount of additional funds. We will also need significant additional funds or a collaborative partner, or both, to finance the research and development activities of our cell product candidates for additional indications. 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;
- the effect of commercialization activities and facility expansions, if and as required; and
- complementary business acquisition or development opportunities.

Because of our long-term funding requirements, we intend to try 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 transaction with Fusion may provide us with some of the required capital to conduct our operations; however, we expect that we will need additional capital. In addition, under certain conditions, Fusion will not be required to purchase our shares, including if the market price of our common stock is less than $0.10, if we are not listed on a national exchange or the OTC Bulletin Board or if there is a material adverse change to our business, properties, operations, financial condition or results of operations.

Additionally, in order to be in compliance with Nasdaq Capital Market rules, we cannot be required to sell, and Fusion Capital shall not have the right or the obligation to purchase, shares of our common stock at a price below $0.36, which represents the greater of the book value per share of our common stock as of March 31, 2009 or the closing sale price per share of our common stock on June 11, 2009, the business day before we entered into the Purchase Agreement, plus $0.01. If we elect to sell our shares of common stock to Fusion Capital at a price per share below $0.36, we may be required to obtain shareholder approval in order to be in compliance with the Nasdaq Capital Market rules.

We only have the right to receive $100,000 every two business days under the Purchase Agreement unless our stock price equals or exceeds $0.25, in which case we can sell greater amounts to Fusion Capital as the price of our common stock increases. The extent we rely on Fusion Capital as a source of funding will depend on a number of factors including, the prevailing market price of our common stock and the extent to which we are able to secure working capital from other sources. Specifically, Fusion Capital shall not have the right nor the obligation to purchase any shares of our common stock on any business days that the market price of our common stock is less than $0.10.

Even if we are able to access the full $30.0 million under the Purchase Agreement with Fusion Capital, we will need additional capital to fully implement our business, operating and development plans. Should the financing we require to sustain our working capital needs be unavailable or prohibitively expensive when we require it, the consequences could be a material adverse effect on our business, operating results, financial condition and prospects.

The sale of our common stock to Fusion Capital may cause dilution and the sale of the shares of common stock acquired by Fusion Capital could cause the price of our common stock to decline

In connection with entering into the Purchase Agreement, we authorized the sale to Fusion Capital of up to 36,000,000 shares of our common stock. The number of shares ultimately offered for sale by Fusion Capital under this prospectus is dependent upon the number of shares purchased by Fusion Capital under the Purchase Agreement. The purchase price for the common stock to be sold to Fusion Capital pursuant to the Purchase Agreement will fluctuate based on the price of our common stock. All 39,872,634 shares registered in this offering are expected to be freely tradable. It is anticipated that shares registered in this offering will be sold over a period of up to 25 months from the date of this prospectus. Depending upon market liquidity at the time, a sale of shares under this offering at any given time could cause the trading price of our common stock to decline. Fusion Capital may ultimately purchase all, some or none of the 36,000,000 shares of common stock not yet issued but registered in this offering. After it has acquired such shares, it may sell all, some or none of such shares. Therefore, sales to Fusion Capital by us under the Purchase Agreement may result in substantial dilution to the interests of other holders of our common stock. The sale of a substantial number of shares of our common stock under this offering, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales. However, we have the right to control the timing and amount of any sales of our shares to Fusion Capital and the Purchase Agreement may be terminated by us at any time at our discretion without any cost to us.

We have experienced significant management turnover, and 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 three previous occasions. As a result of these and other factors, we may not be successful in hiring or retaining key personnel. Our inability to replace any key employee could harm our operations.

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 in those jurisdictions, including the EU under regulations of the EMEA. If we cannot demonstrate the safety and efficacy of our cell product candidates, or of the cells produced in our manufacturing system, we may not be able to obtain required regulatory approvals. If we cannot demonstrate the safety and efficacy of our product candidates, 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. Because our product development programs are designed to satisfy the standards applicable to 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. Each of these cell mixtures (such as our TRC-based products) is, under current regulations, regulated as a biologic product, which requires a Biological License Application (BLA).

EU Directives and regulations (laws) have become effective, and have influenced the requirements for manufacturing cell products and the conduct of clinical trials. Recent changes to the EU Medicinal Products Prime Directive (including added annexes and new regulations) shifted patient-derived cells to the medicinal products category, which will require Marketing Authorizations in order to market and sell these products. These new requirements will require clinical trials with data submission and review by one or more European regulatory bodies. There is uncertainty about which clinical trial activities and data are required, and because of the recent nature of these new directives, laws and regulations, there is no established precedent to understand the timeline or other requirements for Marketing Authorization.

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

In order to commercialize our cell product candidates in the U.S. and the EU we must complete substantial clinical trials, and obtain 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 the 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 across the EU, we must demonstrate, through extensive preclinical studies and clinical trials, the safety and efficacy of our processes and product candidates. 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 directed at improving TRC-based product functionality for certain clinical indications, improving product shelf life, and decreasing the cost of manufacturing our TRC-based products. These production process changes may alter the functionality of our cells, and require various additional levels of experimental and clinical testing and evaluation. Any such testing could lengthen the time before these 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 will be sufficient for a marketable or regulatory approvable product.

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

We rely solely on third parties such as Astro, Ethox, Moll and Lonza to manufacture or supply certain of our devices/manufacturing equipment, as well as component parts 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 fails to perform their respective obligations or if our supply of 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.

Manufacturing our cell products in centralized facilities may increase the risk that we will not have adequate quantities of our cell products for clinical programs.

We rely on third party manufacturers, Fraunhofer Institute for Interfacial Engineering and Biotechnology in Stuttgart, Germany and the Institute of Laboratory and Transfusion Medicine at the Heart Center in Bad Oeynhausen, Germany, to supply our TRC-based cell products for certain EU clinical activities. Reliance on third party manufacturers entails risks including regulatory compliance and quality assurance and the possible breach of the manufacturing agreement by the third party. We are subject to similar regulatory and compliance risks at our site in Ann Arbor, Michigan. All sites could be subject to ongoing, periodic, unannounced inspection by regulatory agencies to ensure strict compliance with GMP regulations and other governmental regulations and corresponding foreign standards. Our present and future manufacturers might not be able to comply with these regulatory requirements. We do not have redundant cell manufacturing sites in the U.S. In the event our cell manufacturing facilities are damaged or destroyed or are subject to regulatory restrictions, our clinical trial programs and other business prospects would be adversely affected.

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-based cell products for tissue repair and regeneration treatments. Even if we obtain all required regulatory approvals, we cannot be certain that our products and processes will be accepted in the marketplace at a level that would allow us to operate profitably. Our products may be unable to achieve commercial acceptance for a number of reasons, such as the availability of alternatives that are less expensive, more effective, or easier to use, the perception of a low cost-benefit ratio for the product amongst physicians and hospitals, or an inadequate level of product support from ourselves or a commercial partner. 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 from third party payors may reduce the demand for, or negatively affect the price of, our products. For example, in the past, published studies suggested that stem cell transplantation for breast cancer, which 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 has negatively affected the marketability of our products in this indication in the past.

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

Some of the manufacturing materials and/or components we use in, and are critical to, implementation of our TRC technology involve the use of animal-derived products, including fetal bovine serum. Suppliers or regulatory changes may limit or restrict the availability of such materials for clinical and commercial use. We currently purchase all of our fetal bovine sera from protected herds in Australia and New Zealand. These sources are considered to be the safest and raise the least amount of concern from the global regulatory agencies. If, for example, the so-called "mad cow disease" occurs in New Zealand or in Australia, it may lead to a restricted supply of the serum currently required for the TRC-based product manufacturing processes. Any restrictions on these materials would impose a potential competitive disadvantage for our products or prevent our ability to manufacture TRC-based 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. The FDA has issued draft regulations for controls over bovine materials. These proposed regulations do not appear to affect our ability to purchase the manufacturing materials we currently use. However, the FDA may issue final regulations that could affect our operations. We do not know 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 will also need to develop new configurations of our cell manufacturing system for these facilities to enable processes and cost efficiencies associated with large-scale manufacturing. Establishing these facilities will require significant capital and expertise. We may need to make such expenditures when there are significant uncertainties as to the market opportunity. 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 some of 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 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 one or more of our TRC-based products 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.

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

As noted above, we will need significant additional equity funding, in addition to the transaction with Fusion, to provide us with the capital to reach our objectives. 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 $0.16 and $0.73 during the twelve month period ended May 31, 2009. 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;
- changes in our revenues or expense levels;
- public concern regarding the safety, efficacy or other aspects of the products or methodologies we are developing;
- reports by securities analysts;
- status of the investment markets;
- concerns related to management transitions; and
- delisting from the Nasdaq Capital Market.

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 recently 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.

If we do not keep pace with our competitors and with technological and market changes, our products will 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 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 cell manufacturing system is 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. Finally, to the extent that others develop new technologies that address the targeted application for our products, our business will suffer.

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. Certain patent equivalents to the U.S. patents have also been issued in other jurisdictions including Australia, Japan, the Republic of Korea, Canada and under the European Convention. Certain of these foreign patents began expiring in 2008. 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, each of 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 manufacture and/or use of TRC-based products during clinical trials, or after commercialization, results in adverse events. 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 may have the effect 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 effect could occur even if our shareholders consider the change in control to be in their best interest. In addition, we are subject to certain anti-takeover provisions of Michigan law that could delay or make more difficult a merger or tender offer involving our company.

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), 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 design and operating effectiveness of our internal controls over financial reporting as of the end of the fiscal year. 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 the design and operating effectiveness of our system of internal accounting controls over financial reporting. 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 is unable to express an unqualified opinion on the design and operating 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.

INCORPORATION BY REFERENCE

This prospectus incorporates by reference important business and financial information that we file with the Securities and Exchange Commission and that we are not including in or delivering with this prospectus. As the SEC allows, incorporated documents are considered part of this prospectus, and we can disclose important information to you by referring you to those documents.

- our annual report on Form 10-K for the fiscal year ended June 30, 2008, filed on August 29, 2008;
- portions of our definitive Proxy Statement for the Annual Meeting of Shareholders held on October 17, 2008 that have been incorporated by reference into the Form 10-K;
- our quarterly reports on Form 10-Q for the quarters ended September 30, 2008, December 31, 2008 and March 31, 2009, filed on November 7, 2008, February 6, 2009 and May 8, 2009, respectively; and
- our current reports on Form 8-K filed with the SEC on August 27, 2008, October 23, 2008, October 29, 2008, May 27, 2009 and June 12, 2009.

Information in this prospectus supersedes related information in the documents listed above.

You may request a copy of any or all of these filings, at no cost, by writing or telephoning us at: Aastrom Biosciences, Inc., 24 Frank Lloyd Wright Drive, P.O. Box 376, Ann Arbor, Michigan 48106, attention: Investor Relations. These filings may also be obtained through the Company's website located at http://www.aastrom.com.

You should rely only on the information incorporated by reference or provided in this prospectus or any supplement. We have not authorized anyone else to provide you with different information. You should not assume that information in this prospectus or any supplement is accurate as of any date other than the date on the front of these documents.

In accordance with these rules, we have incorporated by reference the description of our business, our securities, our properties, any legal proceedings, market price of and dividend's with respect to our common stock, our financial statements and our management's discussion and analysis of our financial condition and results of operations. We have also incorporated by reference disclosure with respect to our officers and directors, their compensation structure, any related transactions with our officers and directors and our shareholders.

The Company advises that there have been no material changes in the Company's affairs that have occurred since the end of the latest fiscal year for which audited financial statements were included in the latest Form 10-K and that have not been described in a Form 10-Q or Form 8-K filed under the Exchange Act.

FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference, contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act. Any statements about our expectations, beliefs, plans, objectives, assumptions or future events or performance are not historical facts and may be forward-looking. These statements are often, but are not always, made through the use of words or phrases such as “anticipates,” “estimates,” “plans,” “projects,” “trends,” “opportunity,” “comfortable,” “current,” “intention,” “position,” “assume,” “potential,” “outlook,” “remain,” “continue,” “maintain,” “sustain,” “seek,” “achieve,” “continuing,” “ongoing,” “expects,” “management believes,” “we believe,” “we intend” and similar words or phrases, or future or conditional verbs such as “will,” “would,” “should,” “could,” “may,” or similar expressions. Accordingly, these statements involve estimates, assumptions and uncertainties which could cause actual results to differ materially from those expressed in them. Any forward-looking statements are qualified in their entirety by reference to the factors discussed throughout this report, and in particular those factors listed under the section “Risk Factors.”

Because the factors referred to in the preceding paragraph could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements we make, you should not place undue reliance on any such forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. These forward-looking statements include statements regarding:

- Potential strategic collaborations with others;
- future capital needs;
- 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; and
- revenue expectations and operating results.

The information contained in this Prospectus, as well as in our SEC filings, identifies important factors that could adversely affect actual results and performance. Prospective investors are urged to carefully consider such factors.

All forward-looking statements attributable to us are expressly qualified in their entirety by the foregoing cautionary statements.

USE OF PROCEEDS

This prospectus relates to shares of our common stock that may be offered and sold from time to time by the selling shareholder. We will receive no proceeds from the sale of shares of common stock in this offering. However, we may receive up to $30.0 million in proceeds from the sale of our common stock to Fusion Capital under the Purchase Agreement. Any proceeds from Fusion Capital we receive under the Purchase Agreement are expected be used to conduct 12-month patient follow-up for patients enrolled, and to be enrolled, in the U.S. Phase II IMPACT-DCM cardiac regeneration clinical trial; to expand cardiovascular clinical development programs beyond the IMPACT-DCM trial; and, to initiate plans for design, development, and scale-out of new GMP cell manufacturing systems in preparation of commercial-scale production.

THE FUSION TRANSACTION

General

On June 12, 2009, we entered into a Common Stock Purchase Agreement with Fusion Capital Fund II, LLC, an Illinois limited liability company. Under the Purchase Agreement, Fusion Capital is obligated, under certain conditions, to purchase shares from us in an aggregate amount of $30.0 million from time to time over a 25-month period. Under the terms of the Purchase Agreement, Fusion Capital has received a commitment fee consisting of 1,452,238 shares of our common stock. Also, we will issue to Fusion Capital an additional 2,420,396 shares as a commitment fee pro rata as we receive the $30.0 million of future funding. As of June 12, 2009, there were 160,223,219 shares outstanding (159,910,319 shares held by non-affiliates) excluding the 36,000,000 shares offered by Fusion Capital pursuant to this Prospectus which it has not yet purchased from us. If all of such 36,000,000 shares offered hereby were issued and outstanding as of the date hereof, the 36,000,000 shares would represent 19.34% of the total common stock outstanding or 19.37% of the non-affiliates shares outstanding as of the date hereof.

Under the Purchase Agreement and the Registration Rights Agreement we are required to register and have included in the offering pursuant to this Prospectus (1)1,452,238 shares which have already been issued, (2) an additional 2,420,396 shares which we may issue in the future as a commitment fee pro rata as we receive the $30.0 million of future funding and (3) at least 36,000,000 shares which we may sell to Fusion Capital after this registration statement is declared effective. All 39,872,634 shares are being offered pursuant to this Prospectus. Under the Purchase Agreement, we have the right but not the obligation to sell more than the 36,000,000 shares to Fusion Capital. If we elect to sell more than the 36,000,000 shares (which we have the right but not the obligation to do), we must first register under the Securities Act any additional shares we may elect to sell to Fusion Capital before we can sell such additional shares. The number of shares ultimately offered for sale by Fusion Capital is dependent upon the number of shares purchased by Fusion Capital under the Purchase Agreement.

We do not have the right to commence any sales of our shares to Fusion Capital until the SEC has declared effective the registration statement of which this Prospectus is a part. The registration statement was declared effective on June 29, 2009 and the conditions to commence funding have generally been satisfied. Generally, we have the right but not the obligation from time to time to sell our shares to Fusion Capital in amounts between $100,000 and $4.0 million depending on certain conditions. We have the right to control the timing and amount of any sales of our shares to Fusion Capital. The purchase price of the shares will be determined based upon the market price of our shares without any fixed discount at the time of each sale. Fusion Capital shall not have the right nor the obligation to purchase any shares of our common stock on any business day that the price of our common stock is below $0.10. If we elect to sell our shares of common stock to Fusion Capital at a price per share below $0.36, we may be required to obtain shareholder approval in order to be in compliance with the Nasdaq Capital Market rules.

There are no negative covenants, restrictions on future fundings, penalties or liquidated damages in the Purchase Agreement or the Registration Rights Agreement. The Purchase Agreement may be terminated by us at any time at our discretion without any cost to us.

Purchase Of Shares Under The Purchase Agreement

Under the Purchase Agreement, on any business day selected by us, we may direct Fusion Capital to purchase up to $100,000 of our common stock. The purchase price per share is equal to the lesser of:

- the lowest sale price of our common stock on the purchase date; or
- the average of the 3 lowest closing sale prices of our common stock during the 12 consecutive business days prior to the date of a purchase by Fusion Capital.

The purchase price will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, or other similar transaction occurring during the business days used to compute the purchase price. We may direct Fusion Capital to make multiple purchases from time to time in our sole discretion; no sooner then every other business day.

Our Right To Increase the Amount to be Purchased

In addition to purchases of up to $100,000 from time to time, we may also from time to time elect on any single business day selected by us to require Fusion Capital to purchase our shares in an amount up to $100,000 provided that our closing share price is not below $0.25 on the purchase date. We may also require Fusion Capital to purchase our shares in an amount up to $250,000 if our closing share price is not below $0.45 on the purchase date. In addition, we can require Fusion Capital to purchase our shares in an amount up to $500,000 if our closing share price is not below $0.75 on the purchase date. Furthermore, we can require Fusion Capital to purchase our shares in an amount up to $1.0 million if our closing share price is not below $1.25 on the purchase date. Moreover, we can require Fusion Capital to purchase our shares in an amount up to $2.0 million if our closing share price is not below $2.00 on the purchase date. Finally, we may also require Fusion Capital to purchase our shares in amount up to $4.0 million if our closing share price is not below $4.00 on the purchase date. We may direct Fusion Capital to make multiple large purchases from time to time in our sole discretion; however, at least 1 business day must have passed since the most recent large purchase was completed. The price at which our common stock would be purchased in this type of larger purchase will be the lesser of (i) the lowest sale price of our common stock on the purchase date and (ii) the lowest purchase price (as described above) during the previous 10 business days prior to the purchase date.

Minimum Purchase Price

Under the Purchase Agreement, we have set a minimum purchase price ("floor price") of $0.10. However, Fusion Capital shall not have the right nor the obligation to purchase any shares of our common stock in the event that the purchase price would be less the floor price. Specifically, Fusion Capital shall not have the right or the obligation to purchase shares of our common stock on any business day that the market price of our common stock is below $0.10.

Compliance with Nasdaq Market Rules

In order to be in compliance with Nasdaq Capital Market rules, we cannot be required to sell, and Fusion Capital shall not have the right or the obligation to purchase, shares of our common stock at a price below $0.36, which represents the greater of the book value per share of our common stock as of March 31, 2009 or the closing price per share of our common stock on June 11, 2009, The business day before we entered into the Purchase Agreement, plus $0.01. If we elect to sell our shares to Fusion Capital at a price per share below $0.36, we may be required to obtain shareholder approval in order to be in compliance with the Nasdaq Capital Market rules.

Events of Default

Generally, Fusion Capital may terminate the Purchase Agreement without any liability or payment to the Company upon the occurrence of any of the following events of default:

- the effectiveness of the registration statement of which this prospectus is a part of lapses for any reason (including, without limitation, the issuance of a stop order) or is unavailable to Fusion Capital for sale of our common stock offered hereby and such lapse or unavailability continues for a period of 10 consecutive business days or for more than an aggregate of 30 business days in any 365-day period;
- suspension by our principal market of our common stock from trading for a period of 3 consecutive business days;
- the de-listing of our common stock from our principal market provided our common stock is not immediately thereafter trading on the OTC Bulletin Board Market, the Nasdaq Global Market, the NYSE Alternext US, or the New York Stock Exchange;
- the transfer agent's failure for 5 business days to issue to Fusion Capital shares of our common stock which Fusion Capital is entitled to under the Purchase Agreement;
- any material breach of the representations or warranties or covenants contained in the Purchase Agreement or any related agreements which has or which could have a material adverse effect on us subject to a cure period of 5 business days; or
- any participation or threatened participation in insolvency or bankruptcy proceedings by or against us; or
- a material adverse change in our business.

Our Termination Rights

We have the unconditional right at any time for any reason to give notice to Fusion Capital terminating the Purchase Agreement without any cost to us.

No Short-Selling or Hedging by Fusion Capital

Fusion Capital has agreed that neither it nor any of its affiliates shall engage in any direct or indirect short-selling or hedging of our common stock during any time prior to the termination of the Purchase Agreement.

Effect of Performance of the Purchase Agreement on Our Stockholders

All 39,872,634 shares registered in this offering are expected to be freely tradable. It is anticipated that shares registered in this offering will be sold over a period of up to 25 months from the date of this prospectus. The sale by Fusion Capital of a significant amount of shares registered in this offering at any given time could cause the market price of our common stock to decline and to be highly volatile. Fusion Capital may ultimately purchase all, some or none of the 39,872,634 shares of common stock not yet issued but registered in this offering. After it has acquired such shares, it may sell all, some or none of such shares. Therefore, sales to Fusion Capital by us under the Purchase Agreement may result in substantial dilution to the interests of other holders of our common stock. However, we have the right to control the timing and amount of any sales of our shares to Fusion Capital and the Purchase Agreement may be terminated by us at any time at our discretion without any cost to us.

In connection with entering into the Purchase Agreement, we authorized the sale to Fusion Capital of up to 36,000,000 shares of our common stock (22.47% of our outstanding on June 12, 2009, the date of the Purchase Agreement). We have the right to terminate the Purchase Agreement without any payment or liability to Fusion Capital at any time. Subject to approval by our board of directors, we have the right but not the obligation to sell more than 36,000,000 shares offered hereby, we will be required to file a new registration statement and have it declared effective by the U.S. Securities & Exchange Commission. The number of shares ultimately offered for sale by Fusion Capital under this prospectus is dependent upon the number of shares purchased by Fusion Capital under the Purchase Agreement. The following table sets forth the amount of proceeds we would receive from Fusion Capital from the sale of shares at varying purchase prices:

Assumed Average Purchase Price	Number of Shares to be Issued if Full Purchase	Percentage of Outstanding Shares After Giving Effect to the Purchased Shares Issued to Fusion Capital(1)	Proceeds from the Sale of Shares to Fusion Capital Under the Common Stock Purchase Agreement
$0.25	36,000,000	18.28%	$ 9,000,000
$0.35(2)	36,000,000	18.25%	$12,600,000
$0.40	36,000,000	18.24%	$14,400,000
$0.50	36,000,000	18.21%	$18,000,000
$0.66	36,000,000	18.17%	$23,760,000
$0.75	36,000,000	18.15%	$27,000,000
$0.83	36,000,000	18.12%	$30,000,000

(1) The denominator is based on 160,223,219 shares outstanding as of June 12, 2009, which includes the 1,452,238 shares previously issued to Fusion Capital (and an additional pro rata amount of the 2,420,396 shares which we will issue in the future as a commitment fee as we receive future funding and the number of shares set forth in the adjacent column). The numerator is based on the number of shares issuable under the Purchase Agreement at the corresponding assumed purchase price set forth in the adjacent column.

(2) Closing sale price of our shares on June 12, 2009.

THE SELLING STOCKHOLDER

The following table presents information regarding the selling stockholder. Neither the selling stockholder nor any of its affiliates has held a position or office, or had any other material relationship, with us. However, in October 2008, we entered into a prior common stock purchase agreement with Fusion Capital, pursuant to which we sold an aggregate of 22,692,694 shares for total gross proceeds of $8,628,561. The agreement was terminated on May 27, 2009.

Selling Stockholder	Shares Beneficially Owned Before Offering	Percentage of Outstanding Shares Beneficially Owned Before Offering (1)	Shares to be Issued in the Offering Assuming The Company Issues The Maximum Number of Shares Under the Purchase Agreement(1)	Percentage of Outstanding Shares Beneficially Owned After Offering
Fusion Capital Fund II, LLC (2)	4,516,066(3)	2.82%	39,872,634	1.53%

(1) Applicable percentage of ownership is based on 160,223,219 shares of our common stock outstanding as of June 12, 2009, together with securities exercisable or convertible into shares of Common Stock within 60 days of June 12, 2009 for the selling stockholder. Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Shares of common stock are deemed to be beneficially owned by the person holding such securities for the purpose of computing the percentage of ownership of such person, but are not treated as outstanding for the purpose of computing the percentage ownership of any other person.

(2) Steven G. Martin and Joshua B. Scheinfeld, the principals of Fusion Capital, are deemed to be beneficial owners of all of the shares of common stock owned by Fusion Capital. Messrs. Martin and Scheinfeld have shared voting and disposition power over the shares being offered under this Prospectus.

(3) We are electing to register hereby 39,872,634 shares in the aggregate, 36,000,000 shares which are not presently issued and which we may sell to Fusion Capital at our discretion, 1,452,238 shares that we have issued to Fusion Capital as a commitment fee and 2,420,396 shares we may issue to Fusion Capital as an additional commitment fee pro rata as we receive the $30 million. Therefore, we may issue to Fusion Capital up to an additional 38,420,396 shares under the Purchase Agreement but Fusion Capital does not presently beneficially own those shares as determined in accordance with the rules of the SEC. Fusion has informed us that prior to entering into the Purchase Agreement Fusion Capital owned 3,063,828 of our shares that it previously acquired.

PLAN OF DISTRIBUTION

The common stock offered by this prospectus is being offered by Fusion Capital Fund II, LLC, the selling shareholder. The common stock may be sold or distributed from time to time by the selling stockholder directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the common stock offered by this Prospectus may be effected in one or more of the following methods:

- ordinary brokers' transactions;
- transactions involving cross or block trades;
- through brokers, dealers, or underwriters who may act solely as agents
- "at the market" into an existing market for the common stock;
- in other ways not involving market makers or established business markets, including direct sales to purchasers or sales effected through agents;
- in privately negotiated transactions; or
- any combination of the foregoing.

In order to comply with the securities laws of certain states, if applicable, the shares may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the shares may not be sold unless they have been registered or qualified for sale in the state or an exemption from the registration or qualification requirement is available and complied with.

Brokers, dealers, underwriters, or agents participating in the distribution of the shares as agents may receive compensation in the form of commissions, discounts, or concessions from the selling shareholder and/or purchasers of the common stock for whom the broker-dealers may act as agent. The compensation paid to a particular broker-dealer may be less than or in excess of customary commissions.

Fusion Capital is an "underwriter" within the meaning of the Securities Act.

Neither we nor Fusion Capital can presently estimate the amount of compensation that any agent will receive. We know of no existing arrangements between Fusion Capital, any other shareholder, broker, dealer, underwriter, or agent relating to the sale or distribution of the shares offered by this Prospectus. At the time a particular offer of shares is made, a prospectus supplement, if required, will be distributed that will set forth the names of any agents, underwriters, or dealers and any compensation from the selling shareholder, and any other required information.

We will pay all of the expenses incident to the registration, offering, and sale of the shares to the public other than commissions or discounts of underwriters, broker-dealers, or agents. We have also agreed to indemnify Fusion Capital and related persons against specified liabilities, including liabilities under the Securities Act.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers, and controlling persons, we have been advised that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is therefore, unenforceable.

Fusion Capital and its affiliates have agreed not to engage in any direct or indirect short selling or hedging of our common stock during the term of the Purchase Agreement.

We have advised Fusion Capital that while it is engaged in a distribution of the shares included in this Prospectus it is required to comply with Regulation M promulgated under the Securities Exchange Act of 1934, as amended. With certain exceptions, Regulation M precludes the selling shareholder, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the shares offered hereby this Prospectus.

This offering will terminate on the date that all shares offered by this Prospectus have been sold by Fusion Capital.

LEGAL MATTERS

The validity of the common stock offered by this Prospectus will be passed upon for us by Dykema Gossett PLLC, Ann Arbor, Michigan, acting as special counsel to the Company.

EXPERTS

The financial statements and management’s assessment of the effectiveness of internal control over financial reporting (which is included in Management’s Report on Internal Control over Financial Reporting) incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended June 30, 2008 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the Securities and Exchange Commission a registration statement on Form S-1 under the Securities Act of 1933, relating to the shares of our common stock being offered by this prospectus. For further information pertaining to our common stock and the shares of common stock being offering by this prospectus, reference is made to such registration statement. This prospectus constitutes the prospectus we filed as a part of the registration statement and it does not contain all information in the registration statement, certain portions of which have been omitted in accordance with the rules and regulations of the Securities and Exchange Commission and certain portions of which have been incorporated by reference to our reports filed with the Securities and Exchange Commission.

In addition, we are subject to the informational requirements of the Securities Exchange Act of 1934, as amended, and, in accordance with such requirements, we file reports, proxy statements and other information with the Securities and Exchange Commission relating to our business, financial statements and other matters.

Reports and proxy and information statements filed under Section 14(a) and 14(c) of the Securities Exchange Act of 1934 and other information filed with the Securities and Exchange Commission as well as copies of the registration statement can be inspected and copied at the public reference facilities maintained by the Securities and Exchange Commission at Room 1024, Judiciary Plaza, 100 F Street, N.E., Washington, D.C. 20549. Copies of such material can also be obtained at prescribed rates from the Public Reference Section of the Securities and Exchange Commission at its principal office at Judiciary Plaza, 100 F Street, N.E., Washington, D.C. 20549. Please call the Securities and Exchange Commission at 1.800.SEC.0330 for further information on the operation of the public reference room. Such material may also be obtained electronically by visiting the SEC's web site on the Internet at http://www.sec.gov. Our common stock is traded on the Nasdaq Capital Market under the symbol "ASTM."

Copies of our filings with the Securities and Exchange Commission are also available, free of charge, on our corporate website at http://www.aastrom.com. The other information found on our website is not incorporated by reference into this prospectus.

You should rely only on the information contained in this Prospectus or the documents incorporated by reference. Neither we nor the selling shareholder has authorized anyone to provide you with any information that is different from that contained in this Prospectus. The information contained in this Prospectus is accurate as of the date of this Prospectus. You should not assume that there have been no changes in the affairs of the Company since the date of this Prospectus or that the information in this Prospectus is correct as of any time after the date of this Prospectus, regardless of the time that this Prospectus is delivered or any sale of the common stock offered by this Prospectus is made. This Prospectus is not an offer to sell or a solicitation of an offer to buy the shares covered by this Prospectus in any jurisdiction where the offer or solicitation is unlawful.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

As permitted by the Michigan Business Corporation Act, our Bylaws contain provisions that permit us to indemnify our directors and officers to the full extent permitted by Michigan law and our Restated Articles of Incorporation, as amended, contain provisions that eliminate the personal liability of our directors in each case for monetary damages to us or our shareholders for breach of their fiduciary duties, except to the extent that Michigan law prohibits indemnification or elimination of liability. These provisions do not limit or eliminate our rights or the rights of any shareholder to seek an injunction or any other non-monetary relief in the event of a breach of a director's or officer's fiduciary duty. In addition, these provisions apply only to claims against a director or officer arising out of his or her role as a director or officer and do not relieve a director or officer from liability if he or she engaged in willful misconduct or a knowing violation of the criminal law or any federal or state securities law.

The rights of indemnification provided in our Bylaws are not exclusive of any other rights that may be available under any insurance or other agreement, by vote of shareholders or disinterested directors or otherwise.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended (the “Securities Act”), may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the Securities and Exchange Commission this type of indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

No dealer, salesperson, or other person has been authorized to give any information or to make any representation not contained in this Prospectus, and, if given or made, such information and representation should not be relied upon as having been authorized by Aastrom Biosciences, Inc. or the selling shareholder. This Prospectus does not constitute an offer to sell or a solicitation of an offer to buy any of the securities offered by this Prospectus in any jurisdiction or to any person to whom it is unlawful to make such offer or solicitation. Neither the delivery of this Prospectus nor any sale made hereunder shall under any circumstances create an implication that there has been no change in the facts set forth in this Prospectus or in the affairs of Aastrom Biosciences, Inc. since the date hereof.

39,872,634 SHARES

Aastrom

AASTROM BIOSCIENCES, INC.

COMMON STOCK

PROSPECTUS

June 30, 2009