



Aastrom Biosciences Receives NIH Grant Extending Proprietary Adult Stem Cell Process to Other Tissues

-- Phase II Grant to Support Bone Formation and Vascularization Capabilities of Company's Tissue Repair Cells --

Ann Arbor, Michigan, August 16, 2005 -- Aastrom Biosciences, Inc. (Nasdaq: ASTM) today announced that it has received a Small Business Innovation Research Phase II grant from the National Institutes of Health (NIH) entitled "Clinical-Scale Production of Osteoprogenitor Cells". The two-year Phase II grant award from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) totals \$740,000, of which \$324,000 has been received for the first year of this study. This Phase II grant award follows a Phase I grant issued to Aastrom in 2003 by the NIH's National Institute of Arthritis and Musculoskeletal and Skin Diseases.

Aastrom's Tissue Repair Cells (TRCs), a bone marrow-derived adult stem and progenitor cell mixture, have been shown to form bone and small blood vessel tubes in laboratory tests. This new grant will support investigations to further increase the overall numbers of the targeted cells thought to be especially important for bone regeneration. This includes studies of the cells contained in TRCs, to better understand how accessory cells support the growth of stem and progenitor cells so they are optimized when the surgeon is ready to use them for bone or vessel regeneration. Another significant goal of this study is the evaluation of Aastrom's unique cell production process in the AastromReplicell® System to facilitate the transition to commercial-level cell manufacturing.

"Considering the highly competitive nature of NIH awards, we are very excited to receive funding to continue our work using TRCs for tissue regeneration in multiple medical indications," said Janet M. Hock, B.D.S., Ph.D., Chief Science Officer and Vice President Global Research of Aastrom. "Further understanding how TRCs contribute to the regeneration of blood vessels should allow us to better utilize our cell products for bone regeneration in orthopedic applications, and for other conditions where regulated revascularization is needed."

The studies supported by this grant will be completed at Aastrom under the direction of Kristin Goltry, Ph.D., in collaboration with Case Western Reserve University, under the direction of James Dennis, Ph.D., and with the University of Michigan, under the direction of James Goulet, M.D. Dr. Goulet is a principal investigator in Aastrom's Phase I/II multi-center human clinical trial for the treatment of severe bone fractures, currently being conducted at 5 sites in the United States, including the University of Michigan Health Center in Ann Arbor. The other participating centers are: Lutheran General Hospital, Park Ridge, IL, William Beaumont Hospital, Royal Oak, MI, Lutheran Medical Center, Brooklyn, NY, and the University of Nebraska Medical Center, Omaha, NE.

About Tissue Repair Cells

Tissue Repair Cells (TRCs) are Aastrom's proprietary mixture of bone marrow-derived adult stem and progenitor cells produced using patented single-pass perfusion technology in the AastromReplicell® System. The clinical procedure begins with the collection of a small sample of bone marrow from the patient's hip in an outpatient setting. TRCs are then produced in the automated AastromReplicell System over a 12-day period. It has been demonstrated in the laboratory that TRCs are able to develop into different types of tissue lineages in response to inductive signals, including blood, bone, cartilage, adipose and vascular tubules. In previous clinical trials, TRCs have been shown to be safe and reliable in regenerating certain normal healthy bone marrow tissues.

About Aastrom Biosciences, Inc.

Aastrom Biosciences, Inc. (Nasdaq: ASTM) is developing patient-specific products for the repair or regeneration of human tissues, utilizing the Company's proprietary adult stem cell technology. Aastrom's strategic position in the tissue regeneration sector is enabled by its proprietary Tissue Repair Cells (TRCs), a mix of bone marrow-derived adult stem and progenitor cells, and the AastromReplicell® System, an industry-unique automated cell production platform used to produce cells for clinical use. TRCs are the core component of the products Aastrom is developing for severe bone fractures, ischemic vascular disease, jaw reconstruction and spine fusion, with Phase I/II level clinical trials active in the U.S. and EU for some of these indications.

For more information, visit Aastrom's website at www.aastrom.com.

This document contains forward-looking statements, including without limitation, statements concerning planned clinical trials, product development objectives, and potential product applications, which involve certain risks and uncertainties. The forward-looking statements are also identified through use of the words "should," and other words of similar meaning. Actual results may differ significantly from the expectations contained in the forward-looking statements. Among the factors that may result in differences are clinical trial results, potential product development difficulties, the effects of competitive therapies, regulatory approval requirements, the availability of financial and other resources and the allocation of resources among different potential uses. These and other significant factors are discussed in greater detail in Aastrom's Annual Report on Form 10-K and other filings with the Securities and Exchange Commission.

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