Aastrom Biosciences Expands U.S. Bone Graft Clinical Trial to Include University of Nebraska Medical Center

-- UNMC is 5th Site Open to Patient Enrollment for the Repair of Severe Leg Fractures Using Aastrom's Proprietary TRCs --

Ann Arbor, Michigan, July 21, 2005 - Aastrom Biosciences, Inc. (Nasdaq: ASTM) announced today that it has expanded the U.S. Phase I/II clinical trial of its adult stem cell-based Tissue Repair Cells (TRCs) in the treatment of severe long bone open or non-union fractures to include the University of Nebraska Medical Center (UNMC) in Omaha, NE. This is the fifth site now engaged in this U.S. multi-center trial, which is already underway at Lutheran General Hospital, Park Ridge, IL, the University of Michigan Health System, Ann Arbor, MI, William Beaumont Hospital, Royal Oak, MI, and Lutheran Medical Center, Brooklyn, NY.

The Principal Investigator for this site is Matthew A. Mormino, M.D. Dr. Mormino is an Associate Professor and Residency Program Director for the Department of Orthopaedic Surgery and Rehabilitation at the University of Nebraska Medical Center in Omaha, Nebraska. Edward V. Fehringer, M.D. will join Dr. Mormino as co-investigator for this trial. Patients wishing to participate in the trial may contact Connie Feschuk, RN, Research Coordinator, at the University of Nebraska Medical Center, (402) 559-4167, or Principal Investigators at any of the other sites.

"This study explores the osteogenesis aspect of bone formation. We intend to establish the ability of adult bone marrow-derived stem and progenitor cells to function as bone forming cells to promote fracture healing in adversarial situations such as open and/or established non-union fractures," said Dr. Mormino. "If this trial proves successful, this procedure will provide an effective alternative to current bone grafting procedures, which are often very painful."

Patients suffering with either long-term, non-healing, or appendicular (fresh) non-union tibial fractures may be eligible to enroll in this study. The clinical procedure begins with the collection of a sample of bone marrow from the patient's hip in an outpatient setting. The adult stem cells (unspecialized cells) and progenitor cells (partially specialized cells) derived from the bone marrow are placed in the AastromReplicell® System where TRCs are produced over a 12-day period. These TRCs are then inserted back into the patient at the fracture site, in an operating room procedure. These cells are designed to act as bone forming cells and promote healing of the open or non-union fractures.

About Department of Orthopaedic Surgery and Rehabilitation, University of Nebraska Medical Center

The Department of Orthopaedic Surgery and Rehabilitation at the University of Nebraska Medical Center is part of a Level 1 Trauma Center. Its physicians provide quality, comprehensive orthopaedic care, and continue to be active in many areas of research. Areas of research currently being explored include outcomes in total joint arthroplasty, minimally invasive surgery in total joint replacement, rotator cuff disease, and whiplash associated disorders in coordination with gait analysis. The department has two laboratory facilities: a Biomechanics Laboratory directed by Hani Haider, Ph.D., and a Nano-Biotechnology Laboratory directed by Fereydoon Namavar, Sc.D., which greatly complement its research efforts.

UNMC is the only public health science center in the state. Its educational programs are responsible for training more health professionals practicing in Nebraska than any other institution. Through its commitment to education, research, patient care and outreach, UNMC has established itself as one of the country's leading centers in cancer, transplantation biology, bioterrorism preparedness, neurodegenerative diseases, cardiovascular diseases, genetics, biomedical technology, ophthalmology and arthritis. UNMC's research funding from external sources is now more than $76 million annually and has resulted in the creation of more than 2,400 highly skilled jobs in the state.

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, potential advantages of TRCs, and potential product applications, which involve certain risks and uncertainties. The forward-looking statements are also identified through use of the words "may," "intend," 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 potential patient accrual difficulties, 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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