Aastrom

Encouraging Clinical Data Reported From Aastrom's First EU Compassionate Use Cardiac Patients

Company Lays Foundation for U.S. Cardiac Clinical Program

ANN ARBOR, Mich., Apr 17, 2008 (PrimeNewswire via COMTEX News Network) -- Aastrom Biosciences, Inc. (Nasdaq:ASTM), a leading regenerative medicine company, today announced encouraging data from the first two compassionate use patients treated with the Company's autologous stem cell therapy for dilated cardiomyopathy (DCM), a type of severe chronic heart failure. Hans Michael Klein, M.D., Professor of Cardiac Surgery at the Dusseldorf University Hospital in Dusseldorf, Germany performed the first human application of Aastrom's Cardiac Repair Cell (CRC) product through direct injection into the heart muscle during open heart surgery in two patients late in 2007. Due to the promising results from these first patients using the CRC treatment, Dr. Klein's clinical activity is ongoing and additional patients are being evaluated for this treatment.

"I have had the opportunity to treat over 70 severe heart failure patients with cell therapy during my career. Until now, the most severe patients had little chance for long-term treatment success. CRCs have the potential to become the new standard of care for patients suffering from DCM," said Dr. Klein. "These patients have a very low quality of life and fewer than 40% survive five years. The improvements we observe in their heart function allow us to measure their progress. We have noted this parallels the substantial improvement in the patient's symptoms and their heart failure stage. These first two cases have been very positive, so I am eager to continue this clinical activity with Aastrom's CRC product."

Dr. Klein's first patient, a 74 year old male diagnosed with ischemic dilated cardiomyopathy who also suffered from extensive three-vessel coronary heart disease, renal insufficiency and unstable angina pectoris (chest pain), was treated with CRCs in November 2007. This patient met the clinical criteria for the most advanced stage of heart failure (class IV) under the New York Heart Association classification guidelines, with severe shortness of breath even without physical activity and when lying in bed. Prior to the CRC treatment his left ventricular ejection fraction was 10% (the percentage of blood pumped out of the heart with each contraction), below the normal range of 60-75% for a typical healthy person. After the CRC treatment and upon discharge from the hospital in January 2008, this patient's ejection fraction had improved to 25-30% and clinical improvement of his heart failure stage had been noted.

The second patient, a 69 year old female diagnosed with severe DCM, also suffered from extensive three-vessel coronary heart disease and had experienced multiple previous heart attacks. This patient had previously undergone coronary artery bypass grafting, several interventional treatments by catheter and had no other treatment options when she was admitted to the hospital. Prior to the CRC treatment her ejection fraction was 25-30%, and upon discharge from the hospital in February 2008 her ejection fraction had improved to 45%.

"Our CRC product is distinguished from other cardiac cell therapies because it is an autologous, mixed cell product that contains large doses of stem and progenitor cells that may be ideal for patients with end-stage cardiac diseases," said Elmar R. Burchardt, MD, PhD, Aastrom's Vice President, Medical Affairs. "Dr. Klein's clinical experiences using our CRCs are extremely important as we develop our U.S. clinical program. We will continue to target the most severe patients suffering from DCM who, other than heart transplant, have no treatment options."

Aastrom's proprietary CRCs received an Orphan Drug Designation from the U.S. Food and Drug Administration (FDA) for use in the treatment of DCM in January 2007. In the U.S., Orphan Drug Designation provides a variety of incentives, including seven years of market exclusivity following FDA approval.

Aastrom is on track for submission of a U.S. Investigational New Drug (IND) application for a cardiac regeneration clinical trial using CRCs during 2008. The Company's ultimate target market for CRCs in the U.S. is 1.8 million no-option heart failure patients, which includes patients suffering from DCM.

About Aastrom Biosciences, Inc.

Aastrom is a leader in the development of autologous cell products for the repair or regeneration of human tissue. The Company's proprietary Tissue Repair Cell (TRC) technology involves the use of a patient's own cells to manufacture products to treat a range of chronic diseases and serious injuries affecting vascular, bone, cardiac and neural tissues. Aastrom's TRC-based products contain increased numbers of stem and early progenitor cells, produced from a small amount of bone marrow collected from the patient. The TRC technology platform has positioned Aastrom to advance multiple products into clinical development. Currently, the Company has a vascular regeneration product in clinical development for the treatment of critical limb ischemia (called the RESTORE-CLI trial), a bone regeneration product in Phase III development for the treatment of

osteonecrosis of the femoral head (called the ON-CORE trial), a cardiac regeneration product in clinical development for dilated cardiomyopathy and a preclinical research program targeting unmet needs in neural health. Aastrom product candidates to treat osteonecrosis of the femoral head and dilated cardiomyopathy have been designated for orphan drug status by the FDA. For more information, visit Aastrom's website at www.aastrom.com. (astmc)

The Aastrom Biosciences, Inc. logo is available at http://www.primenewswire.com/newsroom/prs/?pkgid=3663

This document contains forward-looking statements, including without limitation, statements concerning clinical trial plans and expectations, clinical activity timing, intended product development and commercialization objectives, adequacy of existing capital to support operations for a specified time, future capital needs, and potential advantages and application of Tissue Repair Cell (TRC) Technology, all of which involve certain risks and uncertainties. These statements are often, but are not always, made through the use of words or phrases such as "anticipates," "intends," "estimates," "plans," "expects," "we believe," "we intend," and similar words or phrases, or future or conditional verbs such as "will," "would," "should," "potential," "could," "may," or similar expressions. Actual results may differ significantly from the expectations contained in the forward-looking statements. Among the factors that may result in differences are the inherent uncertainties associated with clinical trial and product development activities, regulatory approval requirements, competitive developments, and the availability of 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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