Aastrom Biosciences Reports Interim Data From Long Bone Non-Union Fracture Clinical Trial

Promising Results Demonstrated in Patients

Ann Arbor, Michigan, September 15, 2006 -- Aastrom Biosciences, Inc. (Nasdaq: ASTM) today reported additional interim results from patients enrolled in its U.S. Phase I/II multi-center clinical trial evaluating Tissue Repair Cells (TRCs) in the treatment of recalcitrant long bone non-union fractures. Of the 36 patients enrolled in the FDA-approved trial, interim results were reported on 23 patients, including 12 patients who completed the total trial observation period of 12 months by August 2006. Of the 12 patients who have completed the one year follow-up period, 10 showed bone bridging at the fracture site, indicating radiographic evidence of healing.

At this time, two subsets of patients totaling 15 have completed clinical examination surveys with their doctors. In the first sub-group, 6 out of 7 patients have returned to weight bearing mobility by 6 months. In the second sub-group, 8 out of 8 patients have returned to weight bearing mobility by 12 months.

Callus formation is the first sign of healing and return of blood flow. After being treated with Aastrom's TRC-based cell product, callus formation was observed in 78% of the 23 patients by 3 months, and in 96% of these patients by 6 months.

All 23 patients had atrophic non-union fractures of a long bone (leg or arm), which had failed to heal after prior standard of care bone grafting and surgical treatments, and consequently, were considered very difficult to treat; 10 of the patients had failed two to three prior treatments. Of the patients reported to date, 10 of the patients were smokers, who have a particularly poor prognosis for healing.

The results were presented by one of the Principal Investigators, Thomas R. Lyon, M.D., Chief of Orthopedic Trauma & Clinical Instructor of Orthopedic Surgery at Lutheran Medical Center, in Brooklyn, New York, and Janet M. Hock, B.D.S., Ph.D., Vice President Global Research and Chief Scientific Officer of Aastrom, today as part of a media briefing at the 28th Annual Meeting of the American Society for Bone and Mineral Research (ASBMR) in Philadelphia, PA. Dr. Lyon and Dr. Hock will also host the poster during this afternoon's Plenary Session.

This announcement follows positive interim data presented earlier this year by Principal Investigator, Matthew L. Jimenez, M.D., of the Illinois Bone & Joint Institute as part of a symposium at the combined Orthopaedic Research Society and American Academy of Orthopaedic Surgeons meetings in Chicago, IL. Dr. Jimenez presented results from his early clinical experience with the first seven patients, all of whom demonstrated bone healing after TRC therapy, and returned to weight bearing mobility by 6 months.

Aastrom will also be represented at the ASBMR meeting by Dezhong Yin, Ph.D., who was chosen to receive one of the society's prestigious Young Investigator Awards. ASBMR Young Investigator Awards recognize young investigators for their excellence in the field of bone and mineral research.

In addition to being chosen for this award, Dr. Yin will give an oral presentation entitled, "Efficient Tracking of the Fate of Human Bone Marrow Stem Cells for Bone Regeneration Using a Bone-Specific Promoter Driving GFP within a Lentiviral Vector," on Saturday, September 16th.

Other Aastrom scientists presenting posters at the meeting on Monday, September 18th, are Kristin Goltry, Ph.D. and Jon Rowley, Ph.D. Dr. Goltry's poster is entitled, "Enhancing the Osteogenic Potential of Bone Marrow-Derived Progenitor Cells in Primary Culture." Dr. Rowley's poster is entitled, "In Vitro Characterization of Adult Stem Cells Formulated with â-Tricalcium Phosphate Matrix for Bone Regeneration."

About Aastrom Biosciences, Inc.

Aastrom Biosciences, Inc. (Nasdaq: ASTM) is developing autologous cell products for the repair or regeneration of multiple human tissues, based on its proprietary Tissue Repair Cell (TRC) technology. Aastrom's TRC-based products are a unique cell mixture containing stromal, stem and progenitor cell populations, produced outside the body from a small amount of bone marrow taken from the patient. TRC-based products have been used in over 225 patients, and are currently in clinical trials for

bone regeneration (long bone fractures and spine fusion) and vascular regeneration (critical limb ischemia) applications. The Company has reported positive interim clinical trial results for TRCs suggesting both the clinical safety and the ability of TRCs to induce tissue regeneration in long bone fractures and jaw bone reconstruction. Recently, the Company's proprietary TRCs received an Orphan Drug Designation from the U.S. Food and Drug Administration (FDA) for use in the treatment of osteonecrosis of the femoral head. In addition, Aastrom is developing plans for a TRC-based therapy for cardiac regeneration.

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

This document contains forward-looking statements, including without limitation, statements concerning product development objectives, planned clinical trials and potential product applications, which involve certain risks and uncertainties. The forward-looking statements are also identified through use of the words "plans," 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 product development difficulties, clinical trial results, potential patient accrual 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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