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March 14, 2008

**VIA EDGAR**

Securities and Exchange Commission  
100 F Street, N.E.  
Washington, D.C. 20549

Attn: Jeffrey P. Riedler  
Assistant Director  
Division of Corporation Finance

Re: Aastrom Biosciences, Inc.  
Form 10-K for the Year Ended June 30, 2007  
File No. 000-22025

Dear Mr. Riedler:

Aastrom Biosciences, Inc. (the "Company") has filed with the Commission an amended Form 10-K on Form 10-K/A for the year ended June 30, 2007 (the "Form 10-K/A"). The changes reflected in the Form 10-K/A are intended to respond to the comments set forth in your letter dated March 3, 2008 (the "Comment Letter"). Specifically, the Form 10-K/A files as an exhibit the Domino's Farms Office Park Lease, which was inadvertently omitted as an exhibit in the Form 10-K filed with the Commission on September 13, 2007. As explained below, the Company does not believe that the other agreements referred to in the Comment Letter are material agreements and, therefore, they not need to be filed as exhibits in the Form 10-K/A.

*Item 15, page 55*

1(a). Musculoskeletal Transplant Foundation. The agreement with the Musculoskeletal Transplant Foundation ("MTF") was entered into in June 2003, and provided for collaboration between the parties up to and including clinical trials, as well as a material transfer agreement whereby the Company receives free cadaver-based demineralized bone matrix material ("DBMM") for use in the Company's U.S. orthopedic clinical trials. The material transfer agreement is the only portion of the collaboration that has been implemented by the parties. The agreement does not require either party to enter into these collaborations nor does it provide for any penalties if they do not do so. There are other commercially available DBMM products as well as synthetic products that could be substituted for the MTF DBMM. So, the Company is not now, nor is it likely in the

future to be, dependent on the supply of MTF DBMM. The Company estimates that the total value of the free DBMM received from MTF since the inception of the agreement to be less than \$75,000. The Company believes that the relationship with MTF is part of its day-to-day normal operations and that it is not substantially dependent on its relationship with MTF, and, therefore, the agreement would not be a material agreement within the meaning of Item 601(b)(10)(ii)(B) of Regulation S-K.

1(b). Orthovita. The Company entered into an agreement with Orthovita in March 2006. This agreement operates as a material transfer agreement and is similar to the MTF agreement except that Orthovita supplies free synthetic ceramic matrix material ("SCMM") that functions similarly to the DBMM supplied by MTF. The Company and prescribing physicians could substitute commercially available SCMM or DBMM if the Orthovita SCMM were not available at commercialization. The Company estimates that the retail value of the SCMM received from Orthovita since inception of the agreement to be approximately \$50,000. The Company believes that the relationship with Orthovita is part of its day-to-day normal operations and that it is not substantially dependent on its relationship with Orthovita, and, therefore, the agreement would not be a material agreement within the meaning of Item 601(b)(10)(ii)(B) of Regulation S-K.

1(c). Fraunhofer. In February 2005, the Company entered into a manufacturing arrangement with Fraunhofer in Germany. The agreement provides certain manufacturing services to the Company for clinical trial and other small-scale production in Germany at the Company's direction. The agreement had an initial term of one year from validation and is being extended on a month-to-month basis. The initial agreement called for payments of approximately 74,000 Euros for facility validation work. There are monthly minimum payments for facilities and personnel of approximately 5,450 Euros. Including validation work, minimum monthly payments and production costs, the Company has paid Fraunhofer approximately \$581,000 over the three years the agreement has been in place, or approximately \$194,000 annually. The Company has several other sites that are capable of and licensed to manufacture product in Germany and Spain which provide redundancy for Fraunhofer. The Company believes that the relationship with Fraunhofer is part of its day-to-day normal operations and that it is not substantially dependent on its relationship with Fraunhofer, and, therefore, the agreement would not be a material agreement within the meaning of Item 601(b)(10)(ii)(B) of Regulation S-K.

2. Domino's Farm Office Lease. As mentioned above, the Company inadvertently omitted the Domino's Farm Office Lease from the exhibits in the Company's Form 10-K for the year ended June 30, 2007. This agreement has been filed as part of the Form 10-K/A.

The Company acknowledges that:

- (a) the Company is responsible for the adequacy of the disclosure in the filings;
  - (b) staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filings; and
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(c) the Company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

The Company appreciates the staff's comments with respect to its Form 10-K for the year ended June 30, 2007. If you have any questions with respect to this letter, please contact the undersigned at (312) 460-5962.

Very truly yours,

SEYFARTH SHAW LLP

/s/ Michael Blount

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Michael E. Blount

cc: Sonia Barros  
George W. Dunbar, Jr.