

February 15, 2011

VIA EDGAR AND FEDERAL EXPRESS

U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549
Attention: Jeffrey Riedler

**Re: Aastrom Biosciences, Inc.
Preliminary Proxy Statement
Filed January 31, 2011
File No. 000-22025**

Ladies and Gentlemen:

This letter is submitted on behalf of Aastrom Biosciences, Inc. (the "Company") in response to the comments of the staff of the Division of Corporation Finance (the "Staff") of the Securities and Exchange Commission (the "Commission") raised in your letter of February 2, 2011 to the undersigned regarding the Company's Preliminary Proxy Statement filed on January 31, 2011 (the "Comment Letter"). For reference purposes, the text of the Comment Letter has been reproduced herein with responses below each numbered comment.

Proposal No. 1: Proposal to Amend the Articles to Increase the Number of Shares of Authorized Common Stock

1. *Please expand the discussion to state whether you have any additional plans, commitments, arrangements, understandings, or agreements, either written or oral, regarding the reservation or issuance of common stock subsequent to the increase in the number of authorized shares other than in connection with the shares already reserved, the increase in the number of shares available under the 2009 Omnibus Incentive Plan, and the "at the market" offering to which you already refer.*

Response 1:

The Company acknowledges the Staff's comment and advises the Staff that the Company has no additional plans, commitments, arrangements, understandings, or agreements, either written or oral, regarding the reservation or issuance of common stock subsequent to the increase in the number of authorized shares other than in connection with the shares already reserved, the increase in the number of shares available under the 2009 Omnibus Incentive Plan, and the "at the market" offering. The Company therefore further advises the Staff that the Company will revise the discussion under the heading "*Purpose and Effect of the Amendment*" on page 5 of the preliminary proxy statement to include the following statement:

“Currently, we do not have any plan, commitment, arrangement, understanding or agreement, either oral or written, regarding the issuance of common stock subsequent to this proposed increase in the number of authorized shares, other than those mentioned above.”

* * *

As requested in the Comment Letter, the Company has acknowledged to us, and has granted us the authority to represent to the Commission on behalf of it, that:

- The Company is responsible for the adequacy and accuracy of the disclosure in the filings;
- 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
- 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.

* * *

If you should have any questions concerning the enclosed matters, please contact the undersigned at (617) 570-1055.

Very truly yours,

/s/ Mitchell S. Bloom

Mitchell S. Bloom

cc: Timothy Mayleben, *Aastrom Biosciences, Inc.*
Scott Durbin, *Aastrom Biosciences, Inc.*
Danielle Lauzon, Esq., *Goodwin Procter LLP*
Jacqueline Mercier, Esq., *Goodwin Procter LLP*
John L. Krug, *U.S. Securities and Exchange Commission*