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YOUR FILE NO. 000-22025
OUR FILE NO. 332396-139747

August 11, 2005
By *EDGAR*

Mr. Jim B. Rosenberg
Senior Assistant Chief Accountant
Securities and Exchange Commission
450 Fifth Street, N.W.
Washington, D.C. 20549

Re: Aastrom Biosciences, Inc.
Form 10-K for the fiscal year ended June 30, 2004
File No. 000-2205

Dear Mr. Rosenberg:

On behalf of Aastrom Biosciences, Inc. (the "Company"), we are providing the following additional information to supplement and update our response of July 14, 2005 to comment number 2 of the staff's comment letter of April 15, 2005.

The Company hereby provides the attached financial data (Exhibit A) summarizing the Company's inventory provisions related to the AstromReplicell System for the fiscal years ended June 30, 2002 and 2003, and for each of the quarterly periods of fiscal year 2004 and for each of the first three quarters of fiscal year 2005. As requested, this information details the periods in which write downs were recorded for the ARS inventories. For your convenience, the information has also been reconciled to the total inventory balances reported at the applicable balance sheet dates in the Company's periodic filings on forms 10-K and 10-Q.

We have also attached a revised inventory accounting policy disclosure (Exhibit B) that the Company proposes to include in its future filings, commencing with the filing of its Annual Report of Form 10-K for the year ended June 30, 2005.

Finally, as requested by the staff, the Company provides the following supplemental information:

- The adjustments to the carrying value summarized in the attached financial data relate to excess ARS inventories for which the estimated probability of sale declined over time. The adjustments to the carrying value or the ARS inventories did not relate to a diminution of value of the inventories due to obsolescence.

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- The Company's method of estimating the net realizable value of its ARS inventories was not applied to any of the Company's other inventories, because the characteristics of that inventory and the Company's market experience with those products provided management with the ability to more precisely determine any necessary lower of cost or market conditions.

We appreciate the assistance of the staff in permitting us to understand and respond to the matters raised in the comment letter. To assist in your review, we are providing a copy of this letter by facsimile to Ms. Christine Allen of the staff. We look forward to receiving your confirmation that the matters raised in the comment letter have been resolved.

Very truly yours,

DLA Piper Rudnick Gray Cary US LLP

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Admitted to practice in California

DJR:sar
Enclosure

cc: Gerald Brennan

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Aastrom Biosciences, Inc.

Inventory Detail

	Year Ended Jun-02	Year Ended Jun-03	Quarter Ended Sep-03	Quarter Ended Dec-03	Quarter Ended Mar-04	Quarter Ended Jun-04	Year Ended Jun-04	Quarter Ended Sep-04	Quarter Ended Dec-04	Quarter Ended Mar-05
ARS inventories at estimated net realizable value at beginning of period	\$1,444,000	\$1,073,266	\$ 250,015	\$ —	\$ —	\$ —	\$ 250,015	\$ —	\$ —	\$ —
ARS inventories under evaluation at potential customer sites	—	86,314	162,203	162,203	162,203	162,203	162,203	162,203	162,203	162,203
Net realizable value adjustment related to excess ARS	(202,000)	(748,296)	(250,015) (3)	—	—	—	(250,015) (3)	—	—	—
Adjustment reflecting final resolution of evaluation units	—	—	—	—	—	—	—	—	—	(162,203) (4)
Reported ARS Inventories at end of period	1,242,000	411,284	162,204	162,203	162,203	162,203	162,203	162,203	162,203	—
Other Inventories (1)	155,297	394,373	382,672	466,166	515,877	226,602	226,602	470,604	197,944	225,794
Total Reported Inventories at end of period	\$1,397,297	\$ 805,657	\$ 544,876	\$628,369	\$678,080	\$388,805	\$ 388,806	\$632,807	\$360,147	\$ 225,794
Approximate equivalent ARS available for sale (2)	16	18	18	18	18	18	18	18	18	16

- (1) Other inventories consist principally of cell cassette and base medium inventories which are sold to the Company's existing ARS customers and clinical sites for production of cells. In the quarter ended September 30, 2004 other inventories also include \$111,495 of equipment which was purchased during the quarter. As disclosed in the Company's 10-Q for the quarter ended December 31, 2004, management now expects that this equipment will be used to establish a Company-owned cell production site and, accordingly it is reported as property and equipment in the Company's balance sheet at March 31, 2005.
- (2) Reflects equivalent units of ARS available for sale assuming a standard ARS configuration. Because ARS inventories consist of purchased finished components that are used to configure ARS only when they are ordered, and a customer order may include a non-standard configuration, these amounts can only be estimated. For example, the standard configuration of an ARS includes four incubators, but a customer could elect to order an ARS with more than four incubators.
- (3) The Company notes that actual charge recorded in the period was \$253,000, reflecting a difference of \$2,985.
- (4) The net carrying value of ARS inventories reflected herein consisted of three systems under evaluation by potential customers, all of which the Company believed carried a high probability of being purchased by the respective potential customers. During the third quarter of fiscal year 2005 (ended March 31, 2005), one of these systems was sold and the other two were returned, one of which was re-deployed to a clinical site. The remaining carrying value of the returned systems was written down to zero. This activity resulted in a \$72,000 charge to cost of sales and a \$90,000 charge to research and development expenses.

Exhibit B

Inventories — The Company values its inventories that consists primarily of finished components, the AastromReplicell System and disposable cell production cassettes and base medium, at the lower of cost (using the first in, first out method) or market. The Company regularly reviews inventory quantities on hand and records a provision to write down obsolete and excess inventories to their estimated net realizable values.

AstromReplicell System (“ARS”) Inventories— Based upon market conditions and the Company’s historical experience with the ARS product line, the carrying value of its aggregate ARS inventories is reduced if such inventories are held in excess of 12 months without sale because the probability-weighted selling price of the aggregate inventories declines after inventory has been on-hand for more than 12 months . The Company continues to reduce the aggregate carrying value of ARS inventories over the ensuing six months if the inventories are not sold. The carrying value of ARS inventories under evaluation at potential customer sites are not reduced so long as the estimated selling price (less selling costs) exceeds the carrying value of the inventories under evaluation. Pursuant to this accounting policy the Company recorded provisions to reduce the carrying value of ARS inventories by \$748,000, \$253,000 and \$99,000 in fiscal years 2003, 2004 and 2005, respectively. The 2005 provision, includes \$90,000 of excess ARS inventories that were re-deployed for clinical use.

Cell Cassette and Base Medium Inventories- The Company maintains cell cassette and base medium inventories for sale to existing customers and clinical sites. The Company evaluates the net realizable value of these inventories considering expected future sales quantities, prices and timing, and considering the limited shelf life of these inventories.