

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

Post-Effective Amendment No. 1
TO

FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

AASTROM BIOSCIENCES, INC.

(Exact name of registrant as specified in its charter)

Michigan
(State or other jurisdiction of
incorporation or organization)

94-3096597
(I.R.S. Employer Identification
Number)

24 Frank Lloyd Wright Drive
Lobby K
Ann Arbor, Michigan 48105
(800) 556-0311
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Dominick C. Colangelo
President and Chief Executive Officer
Aastrom Biosciences, Inc.
Lobby K
Ann Arbor, Michigan 48105
(800) 556-0311
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Mitchell S. Bloom
Danielle M. Lauzon
Goodwin Procter LLP
Exchange Place
Boston, Massachusetts 02109
Telephone: (617) 570-1000
Facsimile: (617) 523-1231

Yvan-Claude Pierre
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Reed Smith LLP
599 Lexington Avenue
New York, New York 10022
Telephone: (212) 521-5400
Facsimile: (212) 521-5450

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended, check the following box. x

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated
filer o

Accelerated
filer x

Non-accelerated filer o
(Do not check if a smaller reporting
company)

Smaller reporting
company o

EXPLANATORY NOTE

This Post-Effective Amendment No. 1 relates to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-188186), declared effective by the Securities and Exchange Commission on August 13, 2013. The Registrant is filing this Post-Effective Amendment No. 1 pursuant to Rule 462(d) for the sole purpose of replacing Exhibit 5.1 to the Registration Statement. This Post-Effective Amendment No. 1 does not modify any provision of Part I or Part II of the Registration Statement other than supplementing Item 16 of Part II as set forth below.

Part II—INFORMATION NOT REQUIRED IN THIS PROSPECTUS

Item 16. Exhibits and Financial Statements Schedules

(a) Exhibits

A list of exhibits filed with this registration statement on Form S-1 is set forth on the Exhibit Index and is incorporated herein by reference.

Exhibit No.	Description
5.1 #	Opinion of Dykema Gossett PLLC.
23.2#	Consent of Dykema Gossett PLLC (included in Exhibit 5.1 hereto).
24.1*	Power of Attorney (included in signature pages to this Registration Statement).

Filed herewith.

* Previously filed.

(b) Financial Statement Schedules

All schedules have been omitted because either they are not required, are not applicable or the information is otherwise set forth in the financial statements and related notes thereto.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this Post-Effective amendment no. 1 to registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Ann Arbor, state of Michigan on August 14, 2013.

AASTROM BIOSCIENCES, INC.

By: /s/ Dominick C. Colangelo
Dominick C. Colangelo

President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Dominick C. Colangelo</u> Dominick C. Colangelo	President, Chief Executive Officer and Director (Principal Executive Officer)	August 14, 2013
<u>/s/ Brian D. Gibson</u> Brian D. Gibson	Vice President of Finance, Chief Accounting Officer and Treasurer (Principal Financial and Accounting Officer)	August 14, 2013
<u>*</u> Robert L. Zerbe, M.D.	Chairman of the Board of Directors	August 14, 2013
<u>*</u> Ronald M. Creswell, Ph.D.	Director	August 14, 2013
<u>*</u> Alan L. Rubino	Director	August 14, 2013
<u>*</u> Nelson M. Sims	Director	August 14, 2013
<u>*/s/ Dominick C. Colangelo</u> Dominick C. Colangelo, Attorney-in-fact		August 14, 2013

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EXHIBIT INDEX

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24.1*	Power of Attorney (included in signature pages to this Registration Statement).

Filed herewith.

* Previously filed.



Dykema Gossett PLLC
39577 Woodward Avenue
Suite 300
Bloomfield Hills, MI 48304

WWW.DYKEMA.COM

Tel: (248) 203-0700
Fax: (248) 203-0763

August 14, 2013

Aastrom Biosciences, Inc.
Domino's Farms, Lobby K
24 Frank Lloyd Wright Drive
Ann Arbor, MI 48105

Re: Aastrom Biosciences, Inc. Post-Effective Amendment No. 1 to Registration Statement on Form S-1 (the "**Registration Statement**")

Dear Ladies and Gentlemen:

As special counsel for Aastrom Biosciences, Inc., a Michigan corporation (the "**Company**"), we are rendering this opinion in connection with the filing with the Securities and Exchange Commission (the "**Commission**") of Post-Effective Amendment No. 1 to registration statement on Form S-1 (Registration No. 333-188186) (the "**Registration Statement**"), under the Securities Act of 1933, as amended (the "**Act**"). The Registration Statement relates to (i) the issuance, offer and sale by the Company of up to 30,000,000 shares of the Company's Common Stock (the "**Shares**") and warrants to purchase up to 30,000,000 additional shares of the Company's Common Stock (the "**Warrants**"), pursuant to an Underwriting Agreement in the form attached as an exhibit to the Registration Statement (the "**Underwriting Agreement**") between the Company and Aegis Capital Corp., as representative of the several underwriters, and (ii) the issuance of up to 30,000,000 shares of the Company's Common Stock issuable upon exercise of the Warrants (the "**Warrant Shares**").

In rendering our opinion, we have examined the Registration Statement (including the exhibits thereto), the form of Warrant, the originals or copies, certified or otherwise identified to our satisfaction, of the restated articles of incorporation ("**Restated Articles of Incorporation**") and the bylaws (the "**Bylaws**") of the Company as amended to date, resolutions of the Company's Board of Directors and such other documents and corporate records relating to the Company, the authorization of the Warrants and the issuance and sale of the Shares and Warrant Shares as we have deemed appropriate.

In our examination, we have assumed the legal capacity of all natural persons, the genuineness of all signatures, the conformity to original documents of all photostatic and facsimile copies submitted to us, and the due execution and delivery of all documents by any party where due

California | Illinois | Michigan | Minnesota | North Carolina | Texas | Washington, D.C.

execution and delivery are a prerequisite to the effectiveness thereof. We have assumed that (i) the Registration Statement, and any amendments thereto (including post-effective amendments) will have become effective and comply with all applicable laws; (ii) the Shares and Warrant Shares will be issued and sold in compliance with applicable federal and state securities laws and in the manner stated in the Registration Statement; and (iii) a definitive underwriting agreement with respect to the Shares, Warrants and Warrant Shares offered will have been duly authorized and validly executed and delivered by the Company and the other parties thereto. As to any facts material to the opinion expressed herein that were not independently established or verified, we have relied upon statements and representations of officers and other representatives of the Company. In addition, we have assumed that the certificates representing the Shares and Warrant Shares will be duly executed and delivered.

On the basis of the foregoing, we are of the opinion that (i) the Shares and Warrant Shares have been duly authorized and that when the price at which the Shares and Warrant Shares will be sold has been approved and determined as adequate by the pricing committee of the Board of Directors of the Company and when the Shares and Warrant Shares have been duly issued and delivered against payment therefor in accordance with the terms of the Underwriting Agreement and certificates evidencing the Shares and Warrant Shares have been duly executed by the duly authorized officers of the Company in accordance with the Bylaws and applicable law, the Shares and Warrant Shares will be validly issued, fully paid and non-assessable; and (ii) that when the price and other terms upon which the Warrants will be sold has been approved by the pricing committee of the Board of Directors of the Company and the Warrants have been duly issued, delivered and paid for in accordance with the terms of the Underwriting Agreement and, as applicable, the Warrant, the terms of the Warrants will be valid and binding obligations of the Company.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to update this opinion or otherwise advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

The foregoing opinions are limited to the laws of the state of Michigan. We express no opinion and make no representation with respect to the law of any other jurisdiction.

We hereby consent to the reference to our firm under the caption "Legal Matters" in the Registration Statement and to the filing of this opinion as an exhibit to the Registration Statement. In giving this consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Act.

Sincerely,

