

Prospectus Supplement No. 4
(to Prospectus dated October 27, 2015)



13,906,331 Shares of Common Stock

This prospectus supplement supplements the prospectus dated October 27, 2015 (the “**Prospectus**”), as supplemented by prospectus supplement No 1. Dated November 16, 2015, prospectus supplement No. 2 dated December 17, 2015 and prospectus supplement No. 3 dated February 16, 2016, which relates to the resale, from time to time by certain selling stockholders (the “**selling stockholders**”), of up to an aggregate 13,906,331 shares of our common stock consisting of:

- (1) 6,040,921 shares of common stock issued to the selling stockholders in connection with the Unit Financing (as defined herein);
- (2) 6,040,921 shares of common stock issuable upon the exercise of outstanding warrants (the “**Unit Warrants**”) issued to the selling stockholders in connection with the Unit Financing;
- (3) 1,824,489 shares of common stock issuable upon the exercise of outstanding compensation warrants issued to certain selling stockholders for services rendered to us in connection with the Unit Financing.

We will not receive any of the proceeds from the resale of these shares of our common stock by the selling stockholders. However, upon exercise we will receive the cash exercise price of the Units Warrants. If the compensation warrants are exercised on a cashless basis we will not receive any cash from these exercises.

The selling stockholders may sell or otherwise dispose of the shares covered by the Prospectus or interests therein on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices. Additional information about the selling stockholders, and the times and manner in which they may offer and sell shares of our common stock under the Prospectus, is provided in the sections entitled “*Selling Stockholders*” and “*Plan of Distribution*” of the Prospectus.

This prospectus supplement incorporates into our Prospectus the information contained in our filing on Form 8-K, filed with the Securities and Exchange Commission on March 2, 2016.

This prospectus supplement should be read in conjunction with the Prospectus. This prospectus supplement updates, amends and supplements the information included or incorporated by reference in the Prospectus. If there is any inconsistency between the information in the Prospectus and this prospectus supplement, you should rely on the information in this prospectus supplement. This prospectus supplement is not complete without, and may not be delivered or utilized except in connection with, the Prospectus, including any supplements and amendments thereto.

Our common stock is presently quoted on the OTCQB under the symbol “ANTB”. On March 14, 2016, the closing bid price of our common stock was \$0.97 per share.

You should consider carefully the risks that we have described in the section entitled “Risk Factors” beginning on Page 8 of the Prospectus before deciding whether to invest in our common stock.

Neither the U.S. Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if the Prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is March 15, 2016

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): February 29, 2016

ANTRIABIO, INC.

(Name of registrant in its charter)

Delaware
(State or jurisdiction
of incorporation or
organization)

000-54495
(Commission File
Number)

27-3440894
(IRS Employer
Identification No.)

1450 Infinite Drive
Louisville, CO 80027
(Address of principal executive offices)

(303) 222-2128
(Registrant's telephone number)

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 1.01 Entry into a Material Definitive Agreement

COLLABORATION AGREEMENT

On February 29, 2016, AntriaBio, Inc. (the “**Company**”, “**we**”, “**us**” or “**our**”) entered into a Strategic Collaboration and License Agreement (“**Collaboration Agreement**”) with a new specialty Korean healthcare firm, pH Pharma Co., Ltd. (“**PH**”). Pursuant to the Collaboration Agreement, the Company conditionally granted PH an exclusive, transferable, license under AB101 patents, patent applications and all other relevant Company intellectual property to manufacture and or offer for sale the Company’s lead product candidate, AB101, in Korea, Cambodia, Laos, Myanmar, Thailand, Malaysia, Singapore and Vietnam (the “**License**”). The License shall only become effective when PH has purchased a minimum of \$8 million of the Company’s securities as detailed below. In addition, under the terms of the Collaboration Agreement, PH and the Company agreed to work together to explore opportunities to utilize the Company’s proprietary microsphere platform for different therapeutic opportunities.

As part of the Collaboration Agreement, PH agreed to purchase \$1 million of the Company’s Series A Preferred Stock under the same terms and conditions as all other purchasers of such securities as set forth below. In addition, in order for the License to become effective, PH must purchase (a) an additional \$1 million of Series A Preferred Stock on the same terms and conditions prior to March 31, 2016 and (b) at least \$6 million of the Company’s Common Stock in one or more private placement transactions at prices to be negotiated in good faith by the parties based upon commercially reasonable terms.

The foregoing description of the Collaboration Agreement is a summary of the terms therein and is qualified in its entirety by the complete text of the Collaboration Agreement which is attached as Exhibit 10.1 hereto and incorporated herein by reference to this Item 1.01.

SERIES A PREFERRED STOCK OFFERING

On December 10, 2015, we announced an initial close of our offering (the “**Offering**”) of Series A Preferred Stock (the “**Offered Shares**” or the “**Series A Preferred Stock**”) at a price per Offered Share of \$1.95 (the “**Series A Purchase Price**”). On March 2, 2016, we completed an additional close (the “**Additional Close**”) of the Offering with six accredited investors, including PH (each an “**Investor**” and collectively, the “**Investors**”). In connection with the Additional Close of the Offering, we entered into Purchase Agreements (collectively, the “**Purchase Agreements**”) by and between us and each Investor in which we issued to the Investors an aggregate of 1,716,667 Offered Shares at the Series A Purchase Price. We received gross cash proceeds of approximately \$3.3 million, excluding Placement Agent (as defined below) compensation, transaction costs, fees and expenses in the Additional Close of the Offering. Approximately \$1 million of the gross proceeds was raised by the Company acting as its own agent in the transaction with PH and such proceeds are not subject to the Placement Agent’s compensation set forth below.

The material terms of the Series A Preferred Stock are described in Items 1.01 and 3.03 of the Company’s Current Report on Form 8-K filed with the SEC on December 10, 2015, with such description of the Series A Preferred Stock incorporated herein by reference to this Item 1.01.

Placement Agent Compensation

Cash Compensation

In connection with the Offering, we paid the placement agent (the “**Placement Agent**”) cash compensation equal to approximately \$165,000 which represents 7% of the aggregate purchase price paid by Investors at the Additional Close who were introduced to the Offering by the Placement Agent (the “**Placement Agent Offerees**”).

Warrant Compensation

In connection with the Offering, we issued to the Placement Agent warrants to purchase 120,385 shares of common stock at an exercise price of \$2.34 per share of common stock (the "Agent's Warrants"), which represents 10% of the aggregate Offered Shares issued to the Placement Agent Offerees at the Additional Close.

The foregoing description of the Agent's Warrants is a summary of the material terms therein and is qualified in its entirety by, (i) Item 1.01 of the Company's Current Report on Form 8-K filed with the SEC on December 10, 2015 and (ii) the complete text of the form of the Agent's Warrant which is attached as Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the SEC on December 10, 2015, which are incorporated herein by reference to this Item 1.01.

RULE 135C NOTICE

The Company is providing this Current Report on Form 8-K in accordance with Rule 135c under the Securities Act of 1933, as amended ("Rule 135c"), and the notice contained herein does not constitute an offer to sell the Company's securities, and is not a solicitation for an offer to purchase the Company's securities. Any securities that may be offered pursuant to any agreement related to the Offering including, but not limited to, any placement agency agreement, any purchase agreement, subscription agreement or any other agreement have not been registered under the Securities Act of 1933, as amended, and may not be offered or sold in the United States absent registration or an applicable exemption from the registration requirements.

Item 3.02 Unregistered Sales of Equity Securities

The information disclosed in Item 1.01 of this Current Report on Form 8-K is incorporated by reference into this Item 3.02. The sale and issuance of the Offered Shares, the Agent's Warrants and the shares issuable upon the conversion or exercise thereof have been determined to be exempt from registration under the U.S. Securities Act of 1933, as amended, in reliance on Section 4(a)(2) thereof and Rule 506 of Regulation D promulgated thereunder as a transaction by an issuer not involving a public offering, in which the investors are accredited and have acquired the securities for investment purposes only and not with a view to or for sale in connection with any distribution thereof. Such securities may not be offered or sold in the United States absent registration or an applicable exemption from registration requirements.

Item 9.01 Financial Statements and Exhibits

EXHIBIT DESCRIPTION

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|------|---|
| 4.1 | Form of Agent's Warrant (incorporated by reference to the Company's Form 8-K filing on December 10, 2015) |
| 10.1 | Collaboration Agreement, dated February 29, 2016 |
| 10.2 | Form of Purchase Agreement (incorporated by reference to the Company's Form 10-Q filing on February 16, 2016) |

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ANTRIABIO, INC.

DATE: March 2, 2016

By: /s/ Nevan Elam
Nevan Elam
Chief Executive Officer & Chairman of the Board

EXHIBIT INDEX

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