ARCA biopharma, Inc.
Form 424B4
February 05, 2015

Prospectus Supplement No. 28 **Filed pursuant to Rule 424(b)(4)**

(to Prospectus dated May 30, 2013) **Registration No. 333-187508**

125,000 Shares of Series A Convertible Preferred Stock

12,500,000 Shares of Common Stock Underlying the Preferred Stock

Warrants to Purchase up to 6,250,000 Shares of Common Stock and

6,250,000 Shares of Common Stock Underlying the Warrants

ARCA biopharma, Inc.

This prospectus supplement supplements the prospectus dated May 30, 2013 (the Prospectus), as supplemented by that certain Prospectus Supplement No. 1 dated July 17, 2013 (Supplement No. 1), by that certain Prospectus Supplement No. 2 dated July 19, 2013 (Supplement No. 2), by that certain Prospectus Supplement No. 3 dated July 24, 2013 (Supplement No. 3), by that certain Prospectus Supplement No. 4 dated July 30, 2013 (Supplement No. 4), by that certain Prospectus Supplement No. 5 dated August 6, 2013 (Supplement No. 5), by that certain Prospectus Supplement No. 6 dated September 4, 2013 (Supplement No. 6), by that certain Prospectus Supplement No. 7 dated September 23, 2013 (Supplement No. 7), by that certain Prospectus Supplement No. 8 dated October 29, 2013 (Supplement No. 8), by that certain Prospectus Supplement No. 9 dated November 6, 2013 (Supplement No. 9), by that certain Prospectus Supplement No. 10 dated November 13, 2013 (Supplement No. 10), by that certain Prospectus Supplement No. 11 dated November 21, 2013 (Supplement No. 11), by that certain Prospectus Supplement No. 12 dated December 5, 2013 (Supplement No. 12), by that certain Prospectus Supplement No. 13 dated January 8, 2014 (Supplement No. 13), by that certain Prospectus Supplement No. 14 dated February 10, 2014 (Supplement No. 14), by that certain Prospectus Supplement No. 15 dated February 12, 2014 (Supplement No. 15), by that certain Prospectus Supplement No. 16 dated February 18, 2014 (Supplement No. 16), by that certain Prospectus Supplement No. 17 dated March 3, 2014 (Supplement No. 17), by that certain Prospectus Supplement No. 18 dated March 20, 2014 (Supplement No. 18), by that certain Prospectus Supplement No. 19 dated May 13, 2014 (Supplement No. 19), by that certain Prospectus Supplement No. 20 dated June 9, 2014 (Supplement No. 20), by that certain Prospectus Supplement No. 21 dated August 13, 2014 (Supplement No. 21), by that certain Prospectus Supplement No. 22 dated August 18, 2014 (Supplement No. 22), by that certain Prospectus Supplement No. 23 dated November 12, 2014 (Supplement No. 23), by that certain Prospectus Supplement No. 24 dated December 1, 2014 (Supplement No. 24), by that certain Prospectus Supplement No. 25 dated December 10, 2014 (Supplement No. 25), by that certain Prospectus Supplement No. 26 dated December 11, 2014 (Supplement No. 26), and by that certain Prospectus Supplement No. 27 dated December 30, 2014 (Supplement No. 27 , and together with Supplement No. 1, Supplement No. 2, Supplement No. 3, Supplement No. 4, Supplement No. 5, Supplement No. 6, Supplement No. 7, Supplement No. 8, Supplement No. 9, Supplement No. 10, Supplement No. 11, Supplement No. 12, Supplement No. 13, Supplement No. 14, Supplement No. 15, Supplement No. 16, Supplement No. 17, Supplement No. 18, Supplement No. 19, Supplement No. 20, Supplement No. 21, Supplement No. 22, Supplement No. 23, Supplement No. 24, Supplement No. 25, and Supplement No. 26, the Supplements), which form a part of our Registration Statement on Form S-1 (Registration No. 333-187508). This prospectus supplement is being filed to update and supplement the information in the Prospectus and the Supplements with the information contained in our current report on Form 8-K, filed with the Securities and Exchange Commission (the Commission) on February 4, 2015 (the Current Report). Accordingly, we have attached the Current Report to this prospectus supplement.

The Prospectus, the Supplements and this prospectus supplement relate to the offer and sale of up to 125,000 shares of Series A Convertible Preferred Stock (Preferred Stock) which are convertible into 12,500,000 shares of Common Stock, warrants to purchase up to 6,250,000 shares of our Common Stock and 6,250,000 shares of Common Stock underlying the warrants.

This prospectus supplement should be read in conjunction with the Prospectus and the Supplements. This prospectus supplement updates and supplements the information in the Prospectus and the Supplements. If there is any inconsistency between the information in the Prospectus, the Supplements and this prospectus supplement, you should rely on the information in this prospectus supplement.

Our common stock is traded on the Nasdaq Global Market under the trading symbol ABIO. On February 4, 2015, the last reported sale price of our common stock was, rounded to the nearest penny, $0.72 per share.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading Risk Factors beginning on page 5 of the Prospectus and beginning on page 22 of our quarterly report on Form 10-Q for the period ended September 30, 2014 before you decide whether to invest in shares of our common stock.

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

The date of this prospectus supplement is February 4, 2015

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 4, 2015 (February 4, 2015)

ARCA biopharma, Inc.

(Exact Name of Registrant as Specified in Charter)

Delaware	000-22873	36-3855489
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

11080 CirclePoint Road, Suite 140, Westminster, CO 80020

(Address of Principal Executive Offices) (Zip Code)

(720) 940-2200

(Registrant s telephone number, including area code)

Not Applicable

(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 (see General Instruction A.2. below):

¨ 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))

Section 8 Other Events

Item 8.01. Other Events.

On February 4, 2015, ARCA biopharma, Inc. (ARCA) announced that the U.S. Patent and Trademark Office issued a patent on methods and compositions of the S-isomer formulation of Gencaro (bucindolol hydrochloride). The press release is furnished as Exhibit 99.1 hereto, the contents of which are incorporated herein by reference.

Section 9 Financial Statements and Exhibits

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Exhibit

Number	**Description**
99.1	Press Release titled ARCA biopharma Announces Patent Issuance for Methods and Compositions of S-Isomer Formulation of Gencaro dated February 4, 2015.

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.

Dated: February 4, 2015

ARCA biopharma, Inc.

(Registrant)

By: /s/ Christopher Ozeroff
Name: Christopher Ozeroff
Title: SVP and General Counsel

INDEX TO EXHIBITS

Exhibit Number	Description
99.1	Press Release titled ARCA biopharma Announces Patent Issuance for Methods and Compositions of S-Isomer Formulation of Gencaro dated February 4, 2015.

Exhibit 99.1

ARCA BIOPHARMA ANNOUNCES PATENT ISSUANCE FOR METHODS AND

COMPOSITIONS OF S-ISOMER FORMULATION OF GENCARO

Patent Includes Methods for Treating Multiple Cardiovascular Disease Indications

Westminster, CO, February 4, 2015 ARCA biopharma, Inc. (Nasdaq: ABIO), a biopharmaceutical company developing genetically targeted therapies for cardiovascular diseases, today announced that the U.S. Patent and Trademark Office (USPTO) has issued a patent on methods and compositions of the S-isomer formulation of Gencaro™ (bucindolol hydrochloride). The patent (USP# 8946284), entitled Methods and Compositions involving (S)-Bucindolol, provides intellectual property protection in the United States for the use of S-isomer Gencaro (Gencaro substantially free of its R-stereoisomer) as a potential treatment for right ventricular heart failure, congestive heart failure, hypertension, angina, myocardial infarction, cardiac arrhythmia, mitral valve prolapse, hypertrophic obstructive cardiomyopathy, or acute dissecting aortic aneurysm.

We are pleased with the USPTO s issuance of this patent, which we believe broadens our intellectual property protection around Gencaro in multiple important cardiovascular disease indications which impact large patient populations globally, said Michael R. Bristow, President and Chief Executive Officer of ARCA. This patent is a result of ARCA s continued focus on innovation in cardiovascular drug development. The S-isomer of Gencaro contains the high affinity beta-1 and beta-2 receptor-blocking action as well as nitric oxide generating activity. In GENETIC-AF, our on-going Phase 2B/3 clinical trial, we are evaluating racemic (contains both S and R isomers) Gencaro as a potential treatment for the prevention of atrial fibrillation in a pharmacogenetically defined heart failure population at high risk of developing recurrent atrial fibrillation.

About ARCA biopharma

ARCA is dedicated to developing genetically-targeted therapies for cardiovascular diseases. The Company s lead product candidate, Gencaro™ (bucindolol hydrochloride), is an investigational, pharmacologically unique beta-blocker and mild vasodilator being evaluated as a potential treatment for atrial fibrillation in the Phase 2B/3 GENETIC-AF clinical trial, which is enrolling patients in the United States and Canada. ARCA has identified common genetic variations that it believes predict individual patient response to Gencaro, giving it the potential to be the first approved genetically-targeted atrial fibrillation prevention treatment. ARCA has a collaboration with Medtronic, Inc. for support of the GENETIC-AF trial. For more information please visit www.arcabiopharma.com.

Safe Harbor Statement

This press release contains forward-looking statements for purposes of the safe harbor provided by the Private Securities Litigation Reform Act of 1995. These statements include, but are not limited to, statements regarding, the potential for S-isomer Gencaro to possibly be a treatment for several different cardiovascular indications, the potential for genetic variations to predict individual patient response to Gencaro, Gencaro s potential to treat atrial fibrillation, future treatment options for patients with atrial fibrillation, and the potential for Gencaro to be the first genetically-targeted atrial fibrillation prevention treatment. Such statements are based on management s current expectations and involve risks and uncertainties. Actual results and performance could differ materially from those projected in the forward-looking statements as a result of many factors, including, without limitation, the risks and uncertainties associated with: the Company s financial resources and whether they will be sufficient to meet the Company s business objectives and operational requirements; results of earlier clinical trials may not be confirmed in future trials, the protection and market exclusivity provided by the Company s intellectual property; risks related to the drug discovery and the regulatory approval process; and, the impact of competitive products and technological changes. These and other factors are identified and described in more detail in ARCA s filings with the SEC, including without limitation the Company s annual report on Form 10-K for the year ended December 31, 2013, and subsequent filings. The Company disclaims any intent or obligation to update these forward-looking statements.

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