ARCA biopharma, Inc. Form 424B4 February 23, 2015

Prospectus Supplement No. 30

Filed pursuant to Rule 424(b)(4) Registration No. 333-187508

(to Prospectus dated May 30, 2013)

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"), by that certain Prospectus Supplement No. 27 dated December 30, 2014 ("Supplement No. 27"), by that certain Prospectus Supplement No. 28 dated February 4, 2015 ("Supplement No. 28"), and by that certain Prospectus Supplement No. 29 dated February 17, 2015 ("Supplement No. 29", 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, Supplement No. 26, Supplement No. 27, and Supplement No. 28, 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 23, 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 23, 2015, the last reported sale price of our common stock was, rounded to the nearest penny, \$0.70 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 23, 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 23, 2015 (February 18, 2015)	
ARCA biopharma, Inc.	
(Exact Name of Registrant as Specified in Charter)	
Delaware 000-22873 36-385 (State or Other Jurisdiction (Commission File Number) (I.R.S.	
of Incorporation) Identifi 11080 CirclePoint Road, Suite 140, Westminster, CO 80020	cation No.)
(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 3 — Securities and Trading Markets

Item 3.01. Notice of Delisting or Failure to Satisfy a Continued Listing Rule or Standard; Transfer of Listing. On February 18, 2015, ARCA biopharma, Inc. ("ARCA") received a notice (the "Notice") from The Nasdaq Stock Market ("NASDAQ") indicating that ARCA's common stock (the "Common Stock") does not meet the continued listing requirement as set forth in NASDAQ Rule 5550(a)(2) based on the closing bid price of the Common Stock for the preceding 30 business days. The minimum closing bid price required to maintain continued listing on The Nasdaq Capital Market is \$1.00 per share.

Under NASDAQ Rule 5810(c)(3)(A), ARCA has a 180 calendar day grace period from the date of the Notice to regain compliance by meeting the continued listing standard. The continued listing standard will be met if the Common Stock has a minimum closing bid price of at least \$1.00 per share for a minimum of 10 consecutive business days during the 180 calendar day grace period. If ARCA does not regain compliance within the 180 calendar day grace period, it will be afforded an additional 180 calendar day compliance period, provided that on the 180th day of the first grace period ARCA (i) meets the applicable market value of publicly held shares requirement for continued listing and all other applicable requirements for initial listing on The Nasdaq Capital Market (except for the bid price requirement) based on ARCA's most recent public filings and market information and (ii) notifies NASDAQ of its intent to cure this deficiency. If ARCA does not indicate its intent to cure the deficiency or if it does not appear to NASDAQ that it would be possible for ARCA to cure the deficiency, ARCA would not be eligible for the second 180 day compliance period, and its securities would then be subject to delisting from the Nasdaq Capital Market. If ARCA is unable to regain compliance during the first 180 calendar day grace period or, if applicable, the second 180 day compliance period, and receives a delisting determination from NASDAQ it may, at that time, request a hearing to remain on The Nasdaq Capital Market, which request will ordinarily suspend such delisting determination until a decision by NASDAQ subsequent to the hearing.

There can be no assurance that ARCA will be successful in maintaining its listing of the Common Stock on The Nasdaq Capital Market. This could impair the liquidity and market price of the Common Stock. In addition, the delisting of the Common Stock from a national exchange could materially adversely affect the ARCA's access to capital markets, and any limitation on market liquidity or reduction in the price of the Common Stock as a result of that delisting could adversely affect ARCA's ability to raise capital on terms acceptable to ARCA, or at all.

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 23, 2015

ARCA biopharma, Inc. (Registrant)

By:/s/ Brian L. Selby Name: Brian L. Selby

Title: VP, Finance and Chief Accounting Officer