

ARCA biopharma, Inc.
Form DEF 14A
September 20, 2018

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 14A

(Rule 14a-101)

INFORMATION REQUIRED IN PROXY STATEMENT

SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934

Filed by the Registrant
Filed by a Party other than the
Registrant
Check the appropriate box:

Preliminary Proxy Statement
Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
Definitive Proxy Statement
Definitive Additional Materials
Soliciting Material Pursuant to § 240.14a-12

ARCA BIOPHARMA, INC.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement if Other Than the Registrant)

Payment of Filing Fee (Check the appropriate box)

2. Form, Schedule or Registration Statement No.:

3. Filing Party:

4. Date Filed:

ARCA BIOPHARMA, INC.

11080 CirclePoint Road, Suite 140

Westminster, Colorado 80020

September 20, 2018

Dear Stockholders of ARCA biopharma, Inc.:

You are cordially invited to attend the Special Meeting (the "Special Meeting") of Stockholders of ARCA biopharma, Inc., a Delaware corporation (the "Company" or "ARCA"). The meeting will be held on Thursday, October 18, 2018 at 9:00 a.m. local time at the Company's Headquarters, 11080 CirclePoint Road, Suite 140, Westminster, Colorado 80020.

The matters scheduled to be considered at the meeting are (1) to approve amendments to the Company's restated certificate of incorporation, as amended, and authorize the Company's Board of Directors, if in their judgment it is necessary, to select and file one such amendment to effect a reverse stock split of the Company's Common Stock, at a ratio of between 1-for-3 and 1-for-20, inclusive, such ratio to be determined at the discretion of the Board of Directors; and (2) to conduct any other business properly brought before the Special Meeting. These items of business are more fully described in the enclosed proxy statement, which you are encouraged to read in its entirety.

All stockholders of ARCA are invited to attend the Special Meeting in person. Whether or not you expect to attend the Special Meeting, please vote your shares as promptly as possible using the enclosed proxy card, or via the Internet or telephone as instructed in the enclosed materials, in order to ensure your representation at the Special Meeting. Even if you have voted by proxy, you may still vote in person if you attend the meeting. Please note, however, that if your shares are held of record by a broker, bank or other nominee and you wish to vote at the meeting, you must obtain a proxy issued in your name from that record holder.

Sincerely,

CHRISTOPHER OZEROFF
Secretary, Senior Vice President and General
Counsel

ARCA BIOPHARMA, INC.

11080 CirclePoint Road, Suite 140

Westminster, Colorado 80020

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

TO BE HELD ON OCTOBER 18, 2018

Notice is hereby given that the Special Meeting of Stockholders (the Special Meeting) of ARCA biopharma, Inc., a Delaware corporation (the Company or ARCA) will be held on Thursday, October 18, 2018 at 9:00 a.m. local time at the headquarters of the Company, 11080 CirclePoint Road, Suite 140, Westminster, Colorado 80020, for the following purposes:

1. To approve amendments to the Company's restated certificate of incorporation, as amended, and authorize the Company's Board of Directors, if in their judgment it is necessary, to select and file one such amendment to effect a reverse stock split of our common stock, at a ratio of between 1-for-3 and 1-for-20, inclusive, such ratio to be determined at the discretion of the Board of Directors; and
2. Any other business that is properly brought before the meeting.

Please refer to the proxy materials accompanying this Notice for further information about the business to be transacted at the Special Meeting.

The record date for the Special Meeting is September 12, 2018. Only stockholders of record at the close of business on that date may vote at the Special Meeting or any adjournment thereof.

By Order of the Board of Directors:

CHRISTOPHER OZEROFF

Secretary, Senior Vice President and General Counsel

WESTMINSTER, CO

SEPTEMBER 20, 2018

All stockholders are cordially invited to attend the Special Meeting in person. Whether or not you expect to attend the Special Meeting, please vote by proxy, as promptly as possible, to ensure your representation at the Special Meeting.

You may vote by proxy by completing and mailing the enclosed proxy card. If you submit a proxy card, we will vote your shares as you direct. If you submit a proxy card without giving specific voting instructions, those shares will be voted as recommended by our Board of Directors.

You may also vote by proxy via the Internet by going to the website <http://www.investorvote.com/ABIO>, and following the instructions provided there, or by telephone, by calling the following number: 1-800-652-VOTE (8683) using a touch-tone phone and follow the recorded instructions. You will be asked to provide the company number and control number found on the proxy card. Your proxy card, Internet or telephone vote must be received by 1:00 a.m. Mountain Time on October 18, 2018 to be counted.

We will make all of our proxy materials available on the Internet at <http://www.investorvote.com/ABIO>, beginning on or about September 27, 2018, and permit voting via the Internet and by telephone as of that date.

If your shares are held by a broker, bank, or other agent, you are considered the beneficial owner of those shares, and your shares are held in street name. If you hold your shares in street name you will receive instructions from your broker, bank or other agent describing how to vote your shares. If you hold shares in street name and do not receive instructions on how to vote your shares, you should contact your broker, bank or other agent promptly and request this information.

Even if you have voted by proxy via one of the procedures listed above, you may still vote in person if you attend the Special Meeting. Please note, however, that if your shares are held of record by a broker, bank or other agent and you wish to vote at the Special Meeting, you must obtain a proxy issued in your name from that record holder.

ARCA BIOPHARMA, INC.

11080 CirclePoint Road, Suite 140

Westminster, Colorado 80020

PROXY STATEMENT

FOR THE SPECIAL MEETING OF STOCKHOLDERS TO BE HELD ON

OCTOBER 18, 2018

This proxy statement (this Proxy Statement) is being furnished to holders of ARCA biopharma, Inc. (sometimes referred to as the Company, ARCA, we, us, and our) common stock, par value \$0.001 per share (the Common Proxies are being solicited on behalf of the Board of Directors of ARCA (the Board of Directors or the Board) to be used at the Special Meeting of Stockholders (the Special Meeting) to be held on Thursday, October 18, 2018 at 9:00 a.m. local time at the headquarters of the Company, 11080 CirclePoint Road, Suite 140, Westminster, Colorado 80020 and at any postponement or adjournment thereof, for the purposes set forth in the Notice of Special Meeting of Stockholders.

ARCA is using the Securities and Exchange Commission (the SEC) rule that allows us to deliver a full set of our proxy materials by mail to all of our stockholders of record as of September 12, 2018 (the Record Date). Our proxy materials include the Notice of Special Meeting (the Notice), this Proxy Statement and a proxy card (collectively, the Proxy Materials), and we will mail our Proxy Materials on or about September 27, 2018. In addition to mailing our Proxy Materials, we will also provide access to our Proxy Materials over the Internet, by September 27, 2018. The Notice and the Proxy Statement instruct you on how to access and review all of the important information contained in the Proxy Materials via the Internet. The Notice and the Proxy Statement also instruct you on how you may submit your vote by mail, the Internet, toll-free number, or in person at the Special Meeting.

All stockholders may view and print ARCA's proxy statement at www.arcabio.com.

QUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS AND VOTING

Why am I receiving these materials?

We have sent you these proxy materials because the Board of Directors is soliciting your proxy to vote at the Special Meeting, including at any adjournments or postponements of the meeting. You are invited to attend the annual meeting to vote on the proposals described in this proxy statement. However, you do not need to attend the meeting to vote your shares. Instead, you may simply complete, sign and return the enclosed proxy card, or follow the instructions below to submit your proxy over the telephone or through the Internet.

We intend to mail these proxy materials on or about September 27, 2018 to all stockholders of record entitled to vote at the annual meeting.

How do I attend the Special Meeting?

The meeting will be held on Thursday, October 18, 2018 at 9:00 a.m. local time at the Company's headquarters, 11080 CirclePoint Road, Suite 140, Westminster, Colorado 80020. Directions to the Special Meeting may be found at www.arcabio.com. Information on how to vote in person at the Special Meeting is discussed below.

Who can vote at the Special Meeting?

Only stockholders of record at the close of business on September 12, 2018 will be entitled to vote at the Special Meeting. On September 12, 2018 there were 13,923,825 shares of Common Stock outstanding and entitled to vote.

Stockholder of Record: Shares Registered in Your Name

If, on September 12, 2018, your shares were registered directly in your name with ARCA's transfer agent, Computershare Trust Company N.A., then you are a stockholder of record. As a stockholder of record, you may vote in person at the Special Meeting or vote by proxy. Whether or not you plan to attend the Special Meeting, we urge you to fill out and return the enclosed proxy card or vote by proxy over the telephone or on the Internet as instructed below to ensure your vote is counted.

Beneficial Owner: Shares Registered in the Name of a Broker or Bank

If, on September 12, 2018, your shares were held, not in your name, but rather in an account at a brokerage firm, bank, dealer, or other similar organization, then you are the beneficial owner of shares held in street name and the Proxy Materials are being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the Special Meeting. As a beneficial owner, you have the right to direct your broker or other agent regarding how to vote the shares in your account. You are also invited to attend the Special Meeting. However, since you are not the stockholder of record, you may not vote your shares in person at the meeting unless you request and obtain a valid proxy from your broker or other agent.

What am I voting on?

Approval of amendments to the Company's restated certificate of incorporation, as amended, and authorization of the Company's Board of Directors, if in their judgment it is necessary, to select and file one such amendment to effect a reverse stock split of the Company's Common Stock, at a ratio of between 1-for-3 and 1-for-20, inclusive, such ratio to be determined at the discretion of the Board of Directors (such proposal, Proposal No. 1).

What if another matter is properly brought before the meeting?

The Board of Directors knows of no other matters that will be presented for consideration at the Special Meeting. If any other matters are properly brought before the meeting, it is the intention of the persons named in the accompanying proxy to vote on those matters in accordance with their best judgment.

How do I vote?

You may either vote For or Against or abstain from voting. The procedures for voting are fairly simple:

Stockholder of Record: Shares Registered in Your Name

If you are a stockholder of record, you may vote in person at the Special Meeting, vote by proxy over the telephone, vote by proxy through the Internet or vote by proxy using the enclosed proxy card. Whether or not you plan to attend the meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the meeting and vote in person even if you have already voted by proxy.

To vote in person, come to the Special Meeting and we will give you a ballot when you arrive.

To vote using the proxy card, simply complete, sign and date the enclosed proxy card and return it promptly in the envelope provided. If you return your signed proxy card to us before the Special Meeting, we will vote your shares as you direct.

To vote over the telephone, dial toll-free **1-800-652-VOTE (8683)** using a touch-tone phone and follow the recorded instructions. You will be asked to provide the company number and control number found on the enclosed proxy card. Your vote must be received by 1:00 a.m. Mountain Time on October 18, 2018 to be counted.

To vote through the Internet, go to <http://www.investorvote.com/ABIO> to complete an electronic proxy card. You will be asked to provide the company number and control number from the enclosed proxy card. Your vote must be received by 1:00 a.m. Mountain Time on October 18, 2018 to be counted.

Beneficial Owner: Shares Registered in the Name of Broker or Bank

If you are a beneficial owner of shares registered in the name of your broker, bank, or other agent, you should have received a voting instruction form with these proxy materials from that organization rather than from ARCA. Simply complete and mail the voting instruction form to ensure that your vote is counted. Alternatively, you may vote by telephone or over the Internet as instructed by your broker or bank. To vote in person at the Special Meeting, you must obtain a valid proxy from your broker, bank, or other agent. Follow the instructions from your broker or bank included with these proxy materials, or contact your broker or bank to request a proxy form.

We provide Internet proxy voting to allow you to vote your shares online, with procedures designed to ensure the authenticity and correctness of your proxy vote instructions. However, please be aware that you must bear any costs associated with your access to the Internet, such as usage charges from Internet access providers and telephone companies.

How many votes do I have?

On each matter to be voted upon, you have one vote for each share of Company Common Stock you own as of September 12, 2018.

What if I return a proxy card or otherwise vote but do not make specific choices?

If you return a signed and dated proxy card or otherwise vote without marking voting selections, your shares will be voted, as applicable, For the approval to effect the reverse stock split. If any other matter is properly presented at the meeting, your proxy holder (one of the individuals named on your proxy card) will vote your shares using his or her best judgment.

Who is paying for this proxy solicitation?

We will pay for the entire cost of soliciting proxies. In addition to these proxy materials, the directors and employees may also solicit proxies in person, by telephone, or by other means of communication. Directors and employees will not be paid any additional compensation for soliciting proxies. We may also reimburse brokerage firms, banks and other agents for the cost of forwarding proxy materials to beneficial owners.

What does it mean if I receive more than one set of Proxy Materials?

If you receive more than one set of Proxy Materials, your shares may be registered in more than one name or in different accounts. Please follow the voting instructions on the proxy cards in the Proxy Materials to ensure that all of your shares are voted.

Can I change my vote after submitting my proxy?

Yes. You can revoke your proxy at any time before the final vote at the meeting. If you are the record holder of your shares, you may revoke your proxy in any one of the following ways:

You may submit another properly completed proxy card with a later date.

You may grant a subsequent proxy by telephone or through the Internet.

You may send a timely written notice that you are revoking your proxy to ARCA's Secretary at 11080 CirclePoint Road, Suite 140, Westminster, Colorado 80020.

You may attend the Special Meeting and vote in person. Simply attending the meeting will not, by itself, revoke your proxy.

Your most current proxy card or telephone or the Internet proxy is the one that is counted.

If your shares are held by your broker or bank as a nominee or agent, you should follow the instructions provided by your broker or bank.

How are votes counted?

Votes will be counted by the inspector of election appointed for the meeting, who will separately count For and Against votes, abstentions and broker non-votes. Abstentions will be counted towards the vote total for Proposal No. 1, and will have the same effect as Against votes. As described in more detail below, as a routine matter, we do not expect a substantial number of broker non-votes.

What are broker non-votes ?

Broker non-votes occur when banks, brokers or others who hold shares in street name for a beneficial owner return a proxy but provide no instruction as to how the shares should be voted on a particular matter. Generally, if shares are held in street name, the beneficial owner of the shares is entitled to give voting instructions to the broker or nominee holding the shares. If the beneficial owner does not provide voting instructions, the broker or nominee can still vote the shares with respect to matters that are considered to be routine, but not with respect to non-routine matters. Under the rules and interpretations of the New York Stock Exchange, non-routine matters are matters that may substantially affect the rights or privileges of stockholders, such as mergers, stockholder proposals and elections of directors, even if not contested. Approval of the stock split contemplated in Proposal No. 1 is considered a routine matter upon which a broker or nominee may vote without instruction from the beneficial owner.

How many votes are needed to approve this proposal?

The affirmative vote of a majority of the Company's outstanding Common Stock is required to pass Proposal No. 1 to approve the amendments of the Company's restated certificate of incorporation, as amended, and authorize the Board of Directors, if in their judgment it is necessary, to select and file one such amendment to effect a reverse stock split of the Company's Common Stock at a ratio of between 1-for-3 and 1-for-20, inclusive, such ratio to be determined at the discretion of the Board of Directors. Brokerage firms have authority to vote their customers' unvoted shares held by the firms in street name on this proposal. If a broker does not exercise this authority, such broker non-votes, as well as any abstentions, will be treated as votes against this proposal.

How does the Board of Directors recommend that I vote?

The Board of Directors recommends that you vote **FOR** Proposal No. 1.

What is the quorum requirement?

A quorum of stockholders is necessary to hold a valid meeting. A quorum will be present if stockholders holding a majority of the outstanding shares entitled to vote are present at the meeting in person or represented by proxy. On September 12, 2018, there were 13,923,825 shares outstanding and entitled to vote. Thus, the holders of 6,961,913 shares must be present in person or represented by proxy at the meeting to have a quorum.

Your shares will be counted towards the quorum only if you submit a valid proxy (or one is submitted on your behalf by your broker, bank or other nominee) or if you vote in person at the meeting. Abstentions and broker non-votes, if any, will be counted towards the quorum requirement. If there is no quorum, the holders of a majority of shares

present at the meeting in person or represented by proxy may adjourn the meeting to another date.

How can I find out the results of the voting at the Special Meeting?

Preliminary voting results will be announced at the Special Meeting. In addition, final voting results will be published in a current report on Form 8-K that we expect to file within four business days after the Special Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.

What proxy materials are available on the internet?

We will make all of the Proxy Materials available on the Internet at <http://www.investorvote.com/ABIO>, beginning on or about September 27, 2018, and permit voting via the Internet and by telephone as of that date.

What are the deadlines for submitting stockholder proposals for the 2019 annual meeting?

To be considered for inclusion in next year's proxy materials, your proposal must be submitted in writing by December 19, 2018, to ARCA's Secretary at 11080 CirclePoint Road, Suite 140, Westminster, Colorado, 80020. If you wish to submit a proposal that is not to be included in next year's proxy materials or nominate a director, you must do so by no earlier than March 2, 2019, and no later than April 1, 2019. You are also advised to review the Company's Bylaws, which contain additional requirements about advance notice of stockholder proposals and director nominations.

PROPOSAL NO. 1

APPROVAL OF CERTIFICATES OF AMENDMENT TO THE COMPANY'S

RESTATED CERTIFICATE OF INCORPORATION TO EFFECT A REVERSE STOCK SPLIT

Introduction

The Board has adopted a resolution approving, and recommending to the Company's stockholders for their approval, a series of proposed certificates of amendment to the Company's Restated Certificate of Incorporation (as amended, the Restated Certificate of Incorporation) to effect a reverse split of the shares of the Company's Common Stock at a ratio of between 1-for-3 and 1-for-20, inclusive, (the Reverse Stock Split). The texts of the forms of the proposed certificates of amendment to the Restated Certificate of Incorporation are annexed to this proxy statement as Annexes A-1 to A-18. Assuming the stockholders approve the proposal, the Board will have the sole discretion under Section 242(c) of the General Corporation Law of the State of Delaware (the DGCL), as it determines to be in the best interest of the Company and its stockholders, both to select the specific exchange ratio within the designated range of between 1-for-3 and 1-for-20, inclusive, and also to decide whether or not to proceed to effect a Reverse Stock Split or instead to abandon the proposed certificates of amendment altogether. If a certificate of amendment is filed with the Secretary of State of the State of Delaware, the certificate of amendment to the Restated Certificate of Incorporation will effect the Reverse Stock Split by reducing the outstanding number of shares of the Company's Common Stock by the ratio to be determined by the Board, but will not increase the par value of the Company's Common Stock, and will not change the number of authorized shares of the Company's Common Stock. If the Board does not implement an approved Reverse Stock Split prior to the one-year anniversary of this meeting, the Board will seek stockholder approval before implementing any Reverse Stock Split after that time.

By approving Proposal No. 1 and the Reverse Stock Split, stockholders will approve each of a series of certificates of amendment to the Restated Certificate of Incorporation pursuant to which any whole number of outstanding shares, between and including three and twenty, would be combined into one share of the Company's Common Stock, and authorize the Board to file only one such certificate of amendment, as determined by the Board in the manner described herein, and to abandon each certificate of amendment not selected by the Board. If approved, the Board may also elect not to effect any Reverse Stock Split and consequently not to file any certificate of amendment to the Restated Certificate of Incorporation. The Board believes that stockholder approval of the series of certificates of amendment granting the Board this discretion, rather than approval of a specified exchange ratio, provides the Board with maximum flexibility to react to then-current market conditions and, therefore, is in the best interests of the Company and its stockholders.

The Company's Nasdaq Listing Compliance

The Company's Common Stock is listed on the Nasdaq Capital Market under the symbol ABIO. To maintain a listing on the Nasdaq Capital Market, the Company must satisfy the applicable listing maintenance standards established by Nasdaq Stock Market LLC (Nasdaq). Among other things, the Company is required to comply with the continued listing requirements of the Nasdaq Capital Market (the Nasdaq Capital Requirements). To comply with the Nasdaq Capital Requirements, the Company must meet each of the following requirements:

1. At least two registered and active Market Makers (as defined in Nasdaq Rule 5005), one of which may be a Market Maker entering a stabilizing bid;

2. Minimum bid price of at least \$1 per share;
3. At least 300 Public Holders (as defined in Nasdaq Rule 5005);
4. At least 500,000 Publicly Held Shares (as defined in Nasdaq Rule 5005); and
5. Market Value (as defined in Nasdaq Rule 5005) of Publicly Held Shares of at least \$1 million.

To comply with the Nasdaq Capital Requirements, the Company must also meet at least one of the following requirements:

1. Equity Standard: Stockholders' equity of at least \$2.5 million;
2. Market Value of Listed Securities Standard: Market Value of Listed Securities (as defined in Nasdaq Rule 5005) of at least \$35 million; or
3. Net Income Standard: Net income from continuing operations of \$500,000 in the most recently completed fiscal year or in two of the here most recently completed fiscal years.

Currently, the Company meets the Nasdaq Capital Requirements, except the \$1.00 minimum bid price. Assuming the stockholders approve Proposal No. 1, the Board will determine whether to effect a Reverse Stock Split in the range of between 1-for-3 and 1-for-20, inclusive, at the ratio determined by the Board to be most likely sufficient to allow the Company to meet and maintain the \$1.00 minimum bid price requirement.

Reasons for the Reverse Stock Split

On April 11, 2018, Nasdaq notified us that the bid price of our Common Stock had closed below the required \$1.00 per share for 30 consecutive trading days, and, accordingly, that we did not comply with the applicable Nasdaq minimum bid price requirement. We have been provided 180 calendar days by Nasdaq to regain compliance with this requirement. We may be eligible for an additional 180 day extension from Nasdaq.

The Board has considered the potential harm to us of a delisting of our Common Stock and has determined that, if our Common Stock continues to trade below \$1.00 per share, the consummation of the Reverse Stock Split is the best way to maintain liquidity by achieving compliance with the Nasdaq Capital Requirements. Approval of Proposal No. 1 will permit us to file one certificate of amendment to the Restated Certificate of Incorporation and the certificate of amendment filed thereby will contain the number of shares selected by the Board within the limits set forth in Proposal No. 1 to be combined into one share of Common Stock.

The Board also believes that the current low per share market price of our Common Stock has a negative effect on the marketability of our existing shares. The Board believes there are several reasons for this effect. First, certain institutional investors have internal policies preventing the purchase of low-priced stocks. Second, a variety of policies and practices of broker-dealers discourage individual brokers within those firms from dealing in low-priced stocks. Third, because the brokers' commissions on low-priced stocks generally represent a higher percentage of the stock price than commissions on higher priced stocks, the current share price of our Common Stock can result in individual stockholders paying transaction costs (commissions, markups or markdowns) that are a higher percentage of their total share value than would be the case if the share price of the Common Stock were substantially higher. This factor is also believed to limit the willingness of some institutions to purchase the Common Stock. The Board anticipates that a Reverse Stock Split will result in a higher bid price for our Common Stock, which may help to alleviate some of these problems.

If Proposal No. 1 is approved by the holders of our Common Stock and the Board decides to implement the Reverse Stock Split, the Board will determine the ratio of the Reverse Stock Split, in the range of between 1-for-3 and 1-for-20, inclusive, as determined in the judgment of the Board to be most likely sufficient to allow us to achieve and maintain compliance with the minimum \$1.00 per share requirement for listing on the Nasdaq Capital Market for the longest period of time while retaining sufficient number of outstanding, tradeable shares to facilitate an adequate

market. By way of illustration, assuming a per share price of \$0.56, which represents the closing price of our Common Stock on the Nasdaq Capital Market on September 12, 2018, rounded to the nearest penny, immediately prior to the filing of the appropriate certificate of amendment to the Restated Certificate of Incorporation, the Board may determine that we should effect a 1-for-3 or 1-for-20 reverse stock split, with the goal of achieving a bid price of \$1.68 or \$11.20 per share, respectively. Please refer to the section entitled "Effects of the Reverse Stock Split" below for more

detailed examples of the effects of the range of ratios.

We believe that maintaining listing on the Nasdaq Capital Market will provide us with a market for the Common Stock that is more accessible than if our Common Stock were traded on the OTC Bulletin Board or in the pink sheets maintained by the OTC Markets Group, Inc. Such alternative markets are generally considered to be less efficient than, and not as broad as, the Nasdaq Capital Market. Among other factors, trading on the Nasdaq Capital Market increases liquidity and may potentially minimize the spread between the bid and asked prices quoted by Market Makers (as defined in Nasdaq Rule 5005). Further, a Nasdaq Capital Market listing may enhance our access to capital, increase our flexibility in responding to anticipated capital requirements and facilitate the use of our Common Stock in any strategic or financing transactions that it may undertake. We believe that prospective investors will view an investment in us more favorably if our shares qualify for listing on the Nasdaq Capital Market as compared with the OTC markets.

We expect that a Reverse Stock Split of our Common Stock will increase the market price of the Common Stock so that we are able to maintain compliance with the Nasdaq minimum bid price listing standard. However, the effect of a Reverse Stock Split on the market price of the Common Stock cannot be predicted with any certainty, and the history of similar stock split combinations for companies in like circumstances is varied. It is possible that the per share price of the Common Stock after the Reverse Stock Split will not rise in proportion to the reduction in the number of shares of the Common Stock outstanding resulting from the Reverse Stock Split, effectively reducing our market capitalization, and there can be no assurance that the market price per post-reverse split share will either exceed or remain in excess of the \$1.00 minimum bid price for a sustained period of time. The market price of our Common Stock may vary based on other factors that are unrelated to the number of shares outstanding, including our future performance.

In order to maintain the listing on the Nasdaq Capital Market, we must maintain compliance with the Nasdaq Capital Requirements. As of June 30, 2018, the Company's Market Value (as defined in Nasdaq Rule 5005) of Listed Securities (as defined in Nasdaq Rule 5005) was \$7,741,647, our market value of Publicly Held Shares (as defined in Nasdaq Rule 5005) was \$7,650,869 and our stockholders' equity was \$8,998,000. Even if we meet the bid price requirement, if we are unable to comply with the other Nasdaq Capital Requirements, Nasdaq may determine to delist the Company's Common Stock from the Nasdaq Capital Market.

The Board does not intend for this transaction to be the first step in a series of plans or proposals of a going private transaction within the meaning of Rule 13e-3 of the Securities Exchange Act of 1934, as amended (the Exchange Act).

Board Discretion to Implement the Reverse Stock Split

If the Board determines to effect the Reverse Stock Split, it will consider certain factors in selecting the specific exchange ratio, including prevailing market conditions, the trading price of the Common Stock and the steps that we will need to take in order to achieve compliance with the bid price requirement and other listing regulations of the Nasdaq Capital Market. Based in part on the price of the Common Stock on the days leading up to the filing of the certificate of amendment to the Restated Certificate of Incorporation effecting the Reverse Stock Split, the Board will determine the ratio of the Reverse Stock Split, in the range of 1-for-3 to 1-for-20, inclusive, that, in the judgment of the Board, is the reverse split ratio most likely to allow us to achieve and maintain compliance with the minimum \$1.00 per share requirement for listing on the Nasdaq Capital Market for the longest period of time, while retaining a sufficient number of outstanding, tradeable shares to facilitate an adequate market.

Notwithstanding approval of the Reverse Stock Split by the stockholders, the Board may, in its sole discretion, abandon all of the proposed certificates of amendment and determine prior to the effectiveness of any filing with the Secretary of State of the State of Delaware not to effect the Reverse Stock Split prior to the one year anniversary of

this Special Meeting of stockholders, as permitted under Section 242(c) of the DGCL. If the Board fails to implement any of the certificates of amendment prior to the one year anniversary of this meeting of stockholders, stockholder approval would again be required prior to implementing any Reverse Stock Split.

Consequences if Stockholder Approval for Proposal Is Not Obtained

If stockholder approval for Proposal No. 1 is not obtained, we will not be able to file a certificate of amendment to the Restated Certificate of Incorporation to effect the Reverse Stock Split. Unless the bid price for the Common Stock increases to greater than \$1.00 for ten consecutive business days prior to October 8, 2018, then we will not meet the listing requirements for the Nasdaq Capital Market. If compliance is not achieved by October 8, 2018, and Nasdaq does not grant us an additional 180 day extension, then our stock would be delisted from the Nasdaq Capital Market. If we were unable to qualify for the additional compliance period, or if we were unable to regain compliance during any such period, the Common Stock would likely be transferred to the OTC Bulletin Board or OTC Market.

If we fail to meet all applicable Nasdaq Capital Requirements and Nasdaq determines to delist the Common Stock, the delisting could adversely affect the market liquidity of the Common Stock and the market price of the Common Stock could decrease. Delisting could also adversely affect our ability to obtain financing for the continuation of our operations and/or result in the loss of confidence by investors, suppliers, commercial partners and employees. In addition, the limited number of authorized shares of the Common Stock that are neither outstanding nor reserved for issuance could adversely affect the ability of us to raise capital through equity financings.

Effects of the Reverse Stock Split

The following table sets forth the number of shares of our Common Stock that would be outstanding immediately after the Reverse Stock Split at various exchange ratios, based on the 13,923,825 shares of Common Stock outstanding as of September 12, 2018. The table does not account for fractional shares that will be paid in cash.

Approximate Shares of	
Common Stock	
Ratio of	Outstanding
Reverse Stock	After Reverse Stock Split
Split	
None	13,923,825
1:3	4,641,275
1:4	3,480,956
1:5	2,784,765
1:6	2,320,637
1:7	1,989,117
1:8	1,740,478
1:9	1,547,091
1:10	1,392,382
1:11	1,265,802
1:12	1,160,318
1:13	1,071,063
1:14	994,558
1:15	928,255
1:16	870,239
1:17	819,048
1:18	773,545
1:19	732,832

1:20

696,191

9

If a stockholder owns 10,000 shares of Common Stock prior to the Reverse Stock Split, after the Reverse Stock Split that same stockholder would own 3,333 shares in the case of a Reverse Stock Split at the ratio of 1-for-3, 2,500 shares in the case of a Reverse Stock Split at the ratio of 1-for-4, 2,000 shares in the case of a Reverse Stock Split at the ratio of 1-for-5, 1,666 shares in the case of a Reverse Stock Split at the ratio of 1-for-6, 1,428 shares in the case of a Reverse Stock Split at the ratio of 1-for-7, 1,250 shares in the case of a Reverse Stock Split at the ratio of 1-for-8, 1,111 shares in the case of a Reverse Stock Split at the ratio of 1-for-9, 1,000 shares in the case of a Reverse Stock Split at the ratio of 1-for-10, 909 shares in the case of a Reverse Stock Split at the ratio of 1-for-11, 833 shares in the case of a Reverse Stock Split at the ratio of 1-for-12, 769 shares in the case of a Reverse Stock Split at the ratio of 1-for-13, 714 shares in the case of a Reverse Stock Split at the ratio of 1-for-14, 666 shares in the case of a Reverse Stock Split at the ratio of 1-for-15, 625 shares in the case of a Reverse Stock Split at the ratio of 1-for-16, 588 shares in the case of a Reverse Stock Split at the ratio of 1-for-17, 555 shares in the case of a Reverse Stock Split at the ratio of 1-for-18, 526 shares in the case of a Reverse Stock Split at the ratio of 1-for-19, and 500 shares in the case of a Reverse Stock Split at the ratio of 1-for-20.

The lasting effect of the proposed Reverse Stock Split upon the market price for our Common Stock cannot be predicted, and the history of similar reverse stock splits for companies in like circumstances is varied. We cannot assure you that the market price per new share of our Common Stock after the Reverse Stock Split (which we refer to as *New Shares*) will rise in proportion to the reduction in the number of old shares of our Common Stock outstanding (which we refer to as *Old Shares*) as a result of the Reverse Stock Split. We also cannot assure you that the market price per New Share will either exceed or remain in excess of the \$1.00 minimum bid price as required by the Nasdaq Capital Requirements, or that we will otherwise continue to meet the Nasdaq Capital Requirement, including, for example, the applicable minimum Market Value (as defined in Nasdaq Rule 5005) of Listed Securities (as defined in Nasdaq Rule 5005) requirements. For instance, in 2015 and 2013 we executed a reverse split of our Common Stock in order to maintain compliance with the Nasdaq Capital Requirements. We cannot assure you that another reverse split of our Common Stock will not be necessary in the future. The market price of our Common Stock is dependent on our financial condition, performance, prospects and a number of other factors, many of which are unrelated to the number of shares outstanding. If our efforts to meet the Nasdaq Capital Requirements are unsuccessful, our Common Stock would remain subject to delisting.

The liquidity of our Common Stock could be adversely affected by the reduced number of shares that would be outstanding after the Reverse Stock Split, and the reduced number of shares may make it more difficult to trade shares of the Common Stock. In addition, the Reverse Stock Split will increase the number of our stockholders who own odd lots (less than 100 shares). Stockholders who hold odd lots typically will experience an increase in the cost of selling their shares, as well as possible greater difficulty in effecting those sales.

The Reverse Stock Split will affect all of our holders of Common Stock uniformly and will not affect any stockholder's percentage ownership interests in the Company or proportionate voting power, except to the extent that the Reverse Stock Split results in any of our stockholders owning a fractional share, in which case such stockholders will receive a cash payment in lieu of such fractional share. The Company's issued Common Stock will remain fully paid and non-assessable.

The Reverse Stock Split will not affect the par value of our Common Stock. As a result, upon the effectiveness of the Reverse Stock Split, the stated capital on our balance sheet attributable to our Common Stock will be reduced proportionately based on the exchange ratio selected by the Board for the Reverse Stock Split, and the additional paid-in capital account will be credited with the amount by which the stated capital is reduced. The per share net income or loss and net book value of our Common Stock will be increased because there will be fewer shares of our Common Stock outstanding. In addition, proportionate adjustments will be made to the per share exercise price and the number of shares issuable upon the exercise or settlement of all outstanding options, restricted stock units and warrants to purchase or acquire, as applicable, shares of Common Stock of the Company, and the number of shares reserved for issuance pursuant to our existing equity incentive, stock option and employee stock purchase plans will

be reduced proportionately based on the exchange ratio selected by the Board for the Reverse Stock Split.

The Reverse Stock Split will have no effect on the total number of shares of Common Stock we are authorized to issue under the Restated Certificate of Incorporation. Therefore, upon effectiveness of the Reverse Stock Split, the number of shares of Common Stock that are authorized and unissued will increase relative to the number of issued and outstanding shares. We may use the additional authorized and unissued shares of our Common Stock resulting from the Reverse Stock Split to issue additional shares of our Common Stock from time to time in equity financings, under our equity compensation plans or in connection with other matters. The Board currently has no plans, arrangements or understandings regarding the issuance of such additional authorized and unissued shares of the Company's Common Stock.

Our Common Stock is currently registered under Section 12(b) of the Exchange Act, and we are subject to the periodic reporting and other requirements of the Exchange Act. The proposed Reverse Stock Split will not affect the registration of the Common Stock under the Exchange Act. If the proposed Reverse Stock Split is implemented, the Common Stock will continue to be reported on the Nasdaq Capital Market under the symbol ABIO.

Potential Anti-Takeover Effect of the Reverse Stock Split

Upon effectiveness of the Reverse Stock Split, the number of authorized shares of Common Stock that are not issued or outstanding will increase relative to the number of shares of Common Stock that are issued and outstanding prior to the Reverse Stock Split. Although this increase could, under certain circumstances, have an anti-takeover effect (for example, by permitting issuances that would dilute the stock ownership of a person seeking to effect a change in the composition of the Board or contemplating a tender offer or other transaction for the combination of the Company with another company), Proposal No. 1 is not being proposed in response to any effort of which we are aware to accumulate shares of our Common Stock or to obtain control of the Company.

Effective Date

The Reverse Stock Split will be effected at 5:01 p.m. Eastern time, on the date that the certificate of amendment to the Restated Certificate of Incorporation is filed with the Secretary of State of the State of Delaware. Beginning at the effective time of the Reverse Stock Split, each certificate representing Old Shares will be deemed for all corporate purposes to represent New Shares. The texts of the proposed certificates of amendment to the Restated Certificate of Incorporation are in the forms annexed to this proxy statement as Annexes A-1 through A-18.

Exchange of Stock Certificates

The transfer agent for the Company will act as the exchange agent for purposes of implementing the exchange of stock certificates. Holders of Old Shares will be asked to surrender to the exchange agent certificates representing Old Shares in exchange for certificates representing New Shares in accordance with the procedures to be set forth in a letter of transmittal to be sent by the exchange agent. No new certificates will be issued to a stockholder until the stockholder has surrendered the stockholder's outstanding certificate(s) together with the properly completed and executed letter of transmittal to the exchange agent. Stockholders should not destroy any stock certificates and should not submit any certificates until requested to do so.

Fractional Shares

No fractional shares of Common Stock will be issued as a result of the proposed Reverse Stock Split. Instead, stockholders who otherwise would be entitled to receive fractional shares will, upon surrender to the exchange agent of certificates representing their fractional shares, be entitled to receive cash in an amount equal to the product obtained by multiplying (i) the closing sales price of our Common Stock as reported on the Nasdaq Capital Market on the effective date of the certificate of amendment to the Restated Certificate of Incorporation by (ii) the number of shares of our Common Stock held by such stockholder before the Reverse Stock Split that would otherwise have been

exchanged for such fractional share interest. Holders of as many as nineteen shares (if we were to implement a 1-for-20 Reverse Stock Split) of our Common Stock would be eliminated as a result of the cash payment in lieu of any issuance of fractional shares or interests in connection with the Reverse Stock Split. The exact number by which the number of

holders of our Common Stock would be reduced will depend on the Reverse Stock Split ratio adopted and the number of stockholders that hold less than the Reverse Stock Split ratio as of the effective date of the Reverse Stock Split. As of September 12, 2018, there were approximately 48 holders of record of our Common Stock, of which 35 were holders of less than 20 shares of our Common Stock. As a result of the Reverse Stock Split, assuming the maximum Reverse Stock Split ratio of 1-for-20 were selected, we estimate that cashing out fractional stockholders would potentially reduce that number of stockholders of record to 13.

Federal Income Tax Consequences of the Reverse Stock Split

The following is a summary of certain material federal income tax consequences of the Reverse Stock Split to certain holders of Old Shares, but does not purport to be a complete discussion of all of the potential tax considerations relating thereto. This summary is based on the provisions of the United States federal income tax law (including the Internal Revenue Code of 1986, as amended (the Code), Treasury Regulations promulgated thereunder, and judicial and administrative interpretations thereof) as of the date hereof, all of which are subject to change retroactively as well as prospectively. Our views regarding the tax consequences of the Reverse Stock Split are not binding upon the Internal Revenue Service or the courts, and there can be no assurance that the Internal Revenue Service or the courts will accept the positions expressed below. This summary assumes that the Old Shares were, and the New Shares will be, held as a capital asset, as defined in the Code (i.e., generally, property held for investment). Further, it does not discuss any state, local, foreign or other tax consequences. In addition, this summary does not address the tax consequences applicable to a holder's particular circumstances or to holders that are subject to special tax rules, including without limitation banks, insurance companies, regulated investment companies, personal holding companies, foreign entities, nonresident alien individuals, broker-dealers, traders, tax-exempt entities and persons who hold Old Shares as a position in a hedging transaction, straddle, conversion transaction or other risk reduction transaction. THIS SUMMARY OF CERTAIN MATERIAL U.S. FEDERAL TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY AND IS NOT TAX ADVICE. EACH STOCKHOLDER IS URGED TO CONSULT WITH SUCH STOCKHOLDER'S OWN TAX ADVISOR WITH RESPECT TO THE TAX CONSEQUENCES OF THE REVERSE STOCK SPLIT.

Other than the cash payments, if any, received by a stockholder in lieu of fractional shares as discussed below, no gain or loss should be recognized by a stockholder upon such stockholder's exchange of Old Shares for New Shares pursuant to the Reverse Stock Split. The aggregate tax basis of the New Shares received pursuant to the Reverse Stock Split will be the same as the stockholder's aggregate tax basis in the Old Shares exchanged therefor, less any basis attributable to fractional share interests. Stockholders who receive cash in lieu of fractional share interests in the New Shares as a result of the Reverse Stock Split will be treated as having received the fractional shares pursuant to the Reverse Stock Split and then as having exchanged the fractional shares for cash in a redemption by the Company, and will generally recognize gain or loss equal to the difference between the amount of cash received in lieu of a fractional share and their adjusted basis allocable to the fractional share interests redeemed. Such gain or loss will be long term capital gain or loss if the Old Shares were held for more than one year. The stockholder's holding period for the New Shares will include the period during which the stockholder held the Old Shares surrendered in the Reverse Stock Split.

No gain or loss will be recognized by us as a result of the Reverse Stock Split.

No Dissenters' Rights

Under applicable Delaware law, the Company's stockholders are not entitled to dissenters' or appraisal rights with respect to the proposed amendment to the Restated Certificate of Incorporation to effect the Reverse Stock Split. We will not independently provide our stockholders with any such right.

Vote Required

The affirmative vote of the holders of a majority of all outstanding shares of the Company's Common Stock on the record date is required for approval of the proposed certificates of amendment to the Restated Certificate of Incorporation set forth in Proposal No. 1 and included as Annexes A-1 through A-18. Broker non-votes with respect to Proposal No. 1 will be treated as votes against the proposal because they represent shares entitled to vote that have not been voted in the affirmative. Abstentions will also have the same effect as votes against the proposal because they represent shares entitled to vote that have not been voted in the affirmative.

THE BOARD UNANIMOUSLY RECOMMENDS A VOTE FOR THIS PROPOSAL

**SECURITY OWNERSHIP OF
CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

Principal Stockholders

The following table sets forth certain information regarding the ownership of the Company's Common Stock as of the August 31, 2018, by: (i) each director and nominee for director, (ii) each of our named executive officers, (iii) all executive officers and directors of the Company as a group, and (iv) all those known by the Company to be beneficial owners of more than five percent of its Common Stock. Unless otherwise noted below, the address of each beneficial owner listed on the table is c/o ARCA biopharma, Inc., 11080 CirclePoint Road, Suite 140, Westminster, Colorado, 80020.

We have determined beneficial ownership in accordance with the rules of the SEC. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the persons and entities named in the table below have sole voting and investment power with respect to all shares of Common Stock that they beneficially own, subject to applicable community property laws. The table is based upon information supplied by officers, directors and principal stockholders and Schedules 13G or 13D, Form 4s or other ownership reports filed with the SEC. For purposes of this table, certain of our outstanding warrants that may be exercisable for fractional shares have been rounded down to the nearest whole number.

In computing the number of shares of Common Stock beneficially owned by a person and the percentage ownership of that person, we deemed outstanding shares of Common Stock subject to options, restricted stock units, or warrants held by that person that are currently exercisable or exercisable within 60 days of August 31, 2018. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person.

The percentages below are based on 13,923,825 shares of our Common Stock outstanding as of August 31, 2018.

Beneficial Owner	Shares Beneficially Owned	Percentage of Shares Beneficially Owned
Directors and Named Executive Officers		
Michael R. Bristow, M.D., Ph.D. (1)	202,061	1.44%
Thomas A. Keuer (2)	50,452	*
Christopher D. Ozeroff (3)	52,452	*
Linda Grais, M.D. (4)	28,138	*
Robert E. Conway (5)	61,941	*
Raymond L. Woosley (6)	27,063	*
Dan J. Mitchell (7)	37,348	*
Anders Hove, M.D. (8)	16,000	*
All current directors and executive officers as a group (9 persons) (9)	507,960	3.56%
5% Stockholders		
Tekla Life Sciences Investors (10)	811,227	5.83%

* Represents beneficial ownership of less than 1% of our Common Stock.

(1) Includes the following owned by (i) Investocor Trust: 19,986 shares, Dr. Bristow is the sole trustee of Investocor Trust; (ii) NFS as Custodian for Michael Bristow's IRA: (a) 25,459 shares and (b) 17,821 shares issuable upon the

exercise of warrants, which warrants are immediately exercisable; and (iii) options to purchase 97,639 shares that are exercisable within 60 days of August 31, 2018.

- (2) Includes options to purchase 37,299 shares that are exercisable within 60 days of August 31, 2018.
- (3) Includes options to purchase 34,915 shares that are exercisable within 60 days of August 31, 2018.
- (4) Includes options to purchase 28,138 shares that are exercisable within 60 days of August 31, 2018.
- (5) Includes options to purchase 26,941 shares that are exercisable within 60 days of August 31, 2018.
- (6) Includes options to purchase 27,063 shares that are exercisable within 60 days of August 31, 2018.
- (7) Includes options to purchase 26,348 shares that are exercisable within 60 days of August 31, 2018.

- (8) Includes options to purchase 16,000 shares that are exercisable within 60 days of August 31, 2018.
- (9) See Notes (1) through (8) above. Also, includes additional options to purchase 35,525 shares that are exercisable within 60 days of August 31, 2018 beneficially owned by our executive officers not listed by name in the table above.
- (10) Based solely on a Schedule 13G filed with the SEC on February 12, 2018. Tekla Capital Management LLC (TCM), as an investment adviser to Tekla Life Sciences Investors (HQL), shares beneficial ownership over the shares held by HQL. Each of TCM and Daniel R. Omstead, through his control of TCM, has sole power to dispose of the shares beneficially owned by HQL. Neither TCM nor Daniel R. Omstead has the sole power to vote or direct the vote of the shares beneficially owned by HQL, which power resides in the fund's Board of Trustees. TCM carries the voting of shares under written guidelines established by the funders Board of Trustees. The address for Tekla Life Sciences Investors is 100 Federal Street, 19th Floor, Boston, MA 02110.

HOUSEHOLDING OF PROXY MATERIALS

The SEC has adopted rules that permit companies and intermediaries (e.g., brokers) to satisfy the delivery requirements for the Proxy Materials with respect to two or more stockholders sharing the same address by delivering a single set of the Proxy Materials addressed to those stockholders. This process, which is commonly referred to as householding, potentially means extra convenience for stockholders and cost savings for companies.

In connection with the Special Meeting, a number of brokers with account holders who are ARCA stockholders will be householding the Proxy Materials. A single set of the Proxy Materials will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your broker that they will be householding communications to your address, householding will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in householding and would prefer to receive a separate set of the Proxy Materials, please notify your broker or ARCA. Direct your written request to Secretary, ARCA biopharma, Inc., 11080 CirclePoint Road, Suite 140, Westminster, Colorado, 80020 or contact Investor Relations at 720-940-2100. The Company undertakes to promptly deliver a separate offset of the Proxy Materials promptly upon receiving your written request. Stockholders who currently receive multiple copies of the Proxy Materials at their addresses and would like to request householding of their communications should contact their brokers.

OTHER MATTERS

The Board of Directors knows of no other matters that will be presented for consideration at the Special Meeting. If any other matters are properly brought before the meeting, it is the intention of the persons named in the accompanying proxy to vote on such matters in accordance with their best judgment.

By Order of the Board of Directors

Christopher Ozeroff
Secretary, Senior Vice President and General
Counsel

September 20, 2018

We will provide without charge to each person, including any beneficial owner, to whom a copy of this proxy statement has been delivered, upon written or oral request, a copy of any or all of the documents referred to above that have been or may be incorporated in this proxy statement by reference. Requests for copies should be directed to: **Corporate Secretary, ARCA biopharma, Inc., 11080 CirclePoint Road, Suite 140, Westminster, Colorado 80020.**

CERTIFICATE OF AMENDMENT
OF
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
ARCA BIOPHARMA, INC.

ARCA BIOPHARMA, INC., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the *DGCL*), does hereby certify:

FIRST: The name of the corporation is ARCA biopharma, Inc. (the *Corporation*).

SECOND: The date of filing of its original Certificate of Incorporation with the Secretary of State of the State of Delaware was March 16, 2004 under the name Nuvelo Merger Sub, Inc.

THIRD: The Board of Directors (the *Board*) of the Corporation, acting in accordance with the provisions of Sections 141 and 242 of the DGCL, adopted resolutions amending its Amended and Restated Certificate of Incorporation, as amended, as follows:

1. Article IV of the Amended and Restated Certificate of Incorporation of the Corporation is hereby amended to add the following provisions in their entirety to the existing provisions of Article IV:

Effective at 5:01 p.m. Eastern time, on the date of the filing of this Certificate of Amendment to the Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware (the *Effective Time*), the shares of the Corporation's Common Stock, par value \$0.001 per share, issued and outstanding immediately prior to the *Effective Time* and the shares of Common Stock issued and held in the treasury of the Corporation immediately prior to the *Effective Time* shall be combined into a smaller number of shares such that each 3 shares of issued and outstanding Common Stock immediately prior to the *Effective Time* are combined into one validly issued, fully paid and nonassessable share of Common Stock, par value \$0.001 per share. Notwithstanding the immediately preceding sentence, no fractional shares shall be issued and, in lieu thereof, upon surrender after the *Effective Time* of a certificate which formerly represented shares of Common Stock that were issued and outstanding immediately prior to the *Effective Time*, any person who would otherwise be entitled to a fractional share of Common Stock as a result of the combination, following the *Effective Time* (after taking into account all fractional shares of Common Stock otherwise issuable to such holder), shall be entitled to receive a cash payment equal to the fraction to which such holder would otherwise be entitled multiplied by the fair value of the Common Stock on the date of the *Effective Time*, as determined by the Board of Directors.

Each stock certificate that, immediately prior to the *Effective Time*, represented shares of Common Stock that were issued and outstanding immediately prior to the *Effective Time* shall, from and after the *Effective Time*, automatically and without the necessity of presenting the same for exchange, represent that number of whole shares of Common Stock after the *Effective Time* into which the shares of Common Stock formerly represented by such certificate shall have been combined (as well as the right to receive cash in lieu of fractional shares of Common Stock after the *Effective Time*), provided however, that each person of record holding a certificate that represented shares of Common Stock that were issued and outstanding immediately prior to the *Effective Time* shall receive, upon surrender of such certificate, a new certificate evidencing and representing the number of whole shares of Common

Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined.

FOURTH: Thereafter, pursuant to a resolution by the Board, this Certificate of Amendment was submitted to the stockholders of the Corporation for their approval in accordance with the provisions of Section 211 and 242 of the DGCL. Accordingly, said proposed amendment has been adopted in accordance with Section 242 of the DGCL.

IN WITNESS WHEREOF, ARCA BIOPHARMA, INC. has caused this Certificate of Amendment to be signed by its duly authorized officer this _____ day of _____, 2018.

ARCA BIOPHARMA, INC.

By:

CHRISTOPHER D. OZEROFF

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1. Article IV of the Amended and Restated Certificate of Incorporation of the Corporation is hereby amended to add the following provisions in their entirety to the existing provisions of Article IV:

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Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined.

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IN WITNESS WHEREOF, ARCA BIOPHARMA, INC. has caused this Certificate of Amendment to be signed by its duly authorized officer this _____ day of _____, 2018.

ARCA BIOPHARMA, INC.

By:

CHRISTOPHER D. OZEROFF

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1. Article IV of the Amended and Restated Certificate of Incorporation of the Corporation is hereby amended to add the following provisions in their entirety to the existing provisions of Article IV:

Effective at 5:01 p.m. Eastern time, on the date of the filing of this Certificate of Amendment to the Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware (the *Effective Time*), the shares of the Corporation's Common Stock, par value \$0.001 per share, issued and outstanding immediately prior to the Effective Time and the shares of Common Stock issued and held in the treasury of the Corporation immediately prior to the Effective Time shall be combined into a smaller number of shares such that each 6 shares of issued and outstanding Common Stock immediately prior to the Effective Time are combined into one validly issued, fully paid and nonassessable share of Common Stock, par value \$0.001 per share. Notwithstanding the immediately preceding sentence, no fractional shares shall be issued and, in lieu thereof, upon surrender after the Effective Time of a certificate which formerly represented shares of Common Stock that were issued and outstanding immediately prior to the Effective Time, any person who would otherwise be entitled to a fractional share of Common Stock as a result of the combination, following the Effective Time (after taking into account all fractional shares of Common Stock otherwise issuable to such holder), shall be entitled to receive a cash payment equal to the fraction to which such holder would otherwise be entitled multiplied by the fair value of the Common Stock on the date of the Effective Time, as determined by the Board of Directors.

Each stock certificate that, immediately prior to the Effective Time, represented shares of Common Stock that were issued and outstanding immediately prior to the Effective Time shall, from and after the Effective Time, automatically and without the necessity of presenting the same for exchange, represent that number of whole shares of Common Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined (as well as the right to receive cash in lieu of fractional shares of Common Stock after the Effective Time), provided however, that each person of record holding a certificate that represented shares of Common Stock that were issued and outstanding immediately prior to the Effective Time shall receive, upon surrender of such certificate, a new certificate evidencing and representing the number of whole shares of Common

Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined.

FOURTH: Thereafter, pursuant to a resolution by the Board, this Certificate of Amendment was submitted to the stockholders of the Corporation for their approval in accordance with the provisions of Section 211 and 242 of the DGCL. Accordingly, said proposed amendment has been adopted in accordance with Section 242 of the DGCL.

IN WITNESS WHEREOF, ARCA BIOPHARMA, INC. has caused this Certificate of Amendment to be signed by its duly authorized officer this _____ day of _____, 2018.

ARCA BIOPHARMA, INC.

By:

CHRISTOPHER D. OZEROFF

CERTIFICATE OF AMENDMENT
OF
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
ARCA BIOPHARMA, INC.

ARCA BIOPHARMA, INC., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the *DGCL*), does hereby certify:

FIRST: The name of the corporation is ARCA biopharma, Inc. (the *Corporation*).

SECOND: The date of filing of its original Certificate of Incorporation with the Secretary of State of the State of Delaware was March 16, 2004 under the name Nuvelo Merger Sub, Inc.

THIRD: The Board of Directors (the *Board*) of the Corporation, acting in accordance with the provisions of Sections 141 and 242 of the DGCL, adopted resolutions amending its Amended and Restated Certificate of Incorporation, as amended, as follows:

1. Article IV of the Amended and Restated Certificate of Incorporation of the Corporation is hereby amended to add the following provisions in their entirety to the existing provisions of Article IV:

Effective at 5:01 p.m. Eastern time, on the date of the filing of this Certificate of Amendment to the Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware (the *Effective Time*), the shares of the Corporation's Common Stock, par value \$0.001 per share, issued and outstanding immediately prior to the Effective Time and the shares of Common Stock issued and held in the treasury of the Corporation immediately prior to the Effective Time shall be combined into a smaller number of shares such that each 7 shares of issued and outstanding Common Stock immediately prior to the Effective Time are combined into one validly issued, fully paid and nonassessable share of Common Stock, par value \$0.001 per share. Notwithstanding the immediately preceding sentence, no fractional shares shall be issued and, in lieu thereof, upon surrender after the Effective Time of a certificate which formerly represented shares of Common Stock that were issued and outstanding immediately prior to the Effective Time, any person who would otherwise be entitled to a fractional share of Common Stock as a result of the combination, following the Effective Time (after taking into account all fractional shares of Common Stock otherwise issuable to such holder), shall be entitled to receive a cash payment equal to the fraction to which such holder would otherwise be entitled multiplied by the fair value of the Common Stock on the date of the Effective Time, as determined by the Board of Directors.

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Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined.

FOURTH: Thereafter, pursuant to a resolution by the Board, this Certificate of Amendment was submitted to the stockholders of the Corporation for their approval in accordance with the provisions of Section 211 and 242 of the DGCL. Accordingly, said proposed amendment has been adopted in accordance with Section 242 of the DGCL.

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ARCA BIOPHARMA, INC.

By:

CHRISTOPHER D. OZEROFF

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OF
ARCA BIOPHARMA, INC.

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Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined.

FOURTH: Thereafter, pursuant to a resolution by the Board, this Certificate of Amendment was submitted to the stockholders of the Corporation for their approval in accordance with the provisions of Section 211 and 242 of the DGCL. Accordingly, said proposed amendment has been adopted in accordance with Section 242 of the DGCL.

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ARCA BIOPHARMA, INC.

By:

CHRISTOPHER D. OZEROFF

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CHRISTOPHER D. OZEROFF

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Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined.

FOURTH: Thereafter, pursuant to a resolution by the Board, this Certificate of Amendment was submitted to the stockholders of the Corporation for their approval in accordance with the provisions of Section 211 and 242 of the DGCL. Accordingly, said proposed amendment has been adopted in accordance with Section 242 of the DGCL.

IN WITNESS WHEREOF, ARCA BIOPHARMA, INC. has caused this Certificate of Amendment to be signed by its duly authorized officer this _____ day of _____, 2018.

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CHRISTOPHER D. OZEROFF

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SECOND: The date of filing of its original Certificate of Incorporation with the Secretary of State of the State of Delaware was March 16, 2004 under the name Nuvelo Merger Sub, Inc.

THIRD: The Board of Directors (the *Board*) of the Corporation, acting in accordance with the provisions of Sections 141 and 242 of the DGCL, adopted resolutions amending its Amended and Restated Certificate of Incorporation, as amended, as follows:

1. Article IV of the Amended and Restated Certificate of Incorporation of the Corporation is hereby amended to add the following provisions in their entirety to the existing provisions of Article IV:

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Each stock certificate that, immediately prior to the *Effective Time*, represented shares of Common Stock that were issued and outstanding immediately prior to the *Effective Time* shall, from and after the *Effective Time*, automatically and without the necessity of presenting the same for exchange, represent that number of whole shares of Common Stock after the *Effective Time* into which the shares of Common Stock formerly represented by such certificate shall have been combined (as well as the right to receive cash in lieu of fractional shares of Common Stock after the *Effective Time*), provided however, that each person of record holding a certificate that represented shares of Common Stock that were issued and outstanding immediately prior to the *Effective Time* shall receive, upon surrender of such certificate, a new certificate evidencing and representing the number of whole shares of Common

Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined.

FOURTH: Thereafter, pursuant to a resolution by the Board, this Certificate of Amendment was submitted to the stockholders of the Corporation for their approval in accordance with the provisions of Section 211 and 242 of the DGCL. Accordingly, said proposed amendment has been adopted in accordance with Section 242 of the DGCL.

IN WITNESS WHEREOF, ARCA BIOPHARMA, INC. has caused this Certificate of Amendment to be signed by its duly authorized officer this _____ day of _____, 2018.

ARCA BIOPHARMA, INC.

By:

CHRISTOPHER D. OZEROFF

CERTIFICATE OF AMENDMENT
OF
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
ARCA BIOPHARMA, INC.

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FIRST: The name of the corporation is ARCA biopharma, Inc. (the *Corporation*).

SECOND: The date of filing of its original Certificate of Incorporation with the Secretary of State of the State of Delaware was March 16, 2004 under the name Nuvelo Merger Sub, Inc.

THIRD: The Board of Directors (the *Board*) of the Corporation, acting in accordance with the provisions of Sections 141 and 242 of the DGCL, adopted resolutions amending its Amended and Restated Certificate of Incorporation, as amended, as follows:

1. Article IV of the Amended and Restated Certificate of Incorporation of the Corporation is hereby amended to add the following provisions in their entirety to the existing provisions of Article IV:

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ARCA BIOPHARMA, INC.

By:

CHRISTOPHER D. OZEROFF

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1. Article IV of the Amended and Restated Certificate of Incorporation of the Corporation is hereby amended to add the following provisions in their entirety to the existing provisions of Article IV:

Effective at 5:01 p.m. Eastern time, on the date of the filing of this Certificate of Amendment to the Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware (the *Effective Time*), the shares of the Corporation's Common Stock, par value \$0.001 per share, issued and outstanding immediately prior to the Effective Time and the shares of Common Stock issued and held in the treasury of the Corporation immediately prior to the Effective Time shall be combined into a smaller number of shares such that each 15 shares of issued and outstanding Common Stock immediately prior to the Effective Time are combined into one validly issued, fully paid and nonassessable share of Common Stock, par value \$0.001 per share. Notwithstanding the immediately preceding sentence, no fractional shares shall be issued and, in lieu thereof, upon surrender after the Effective Time of a certificate which formerly represented shares of Common Stock that were issued and outstanding immediately prior to the Effective Time, any person who would otherwise be entitled to a fractional share of Common Stock as a result of the combination, following the Effective Time (after taking into account all fractional shares of Common Stock otherwise issuable to such holder), shall be entitled to receive a cash payment equal to the fraction to which such holder would otherwise be entitled multiplied by the fair value of the Common Stock on the date of the Effective Time, as determined by the Board of Directors.

Each stock certificate that, immediately prior to the Effective Time, represented shares of Common Stock that were issued and outstanding immediately prior to the Effective Time shall, from and after the Effective Time, automatically and without the necessity of presenting the same for exchange, represent that number of whole shares of Common Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined (as well as the right to receive cash in lieu of fractional shares of Common Stock after the Effective Time), provided however, that each person of record holding a certificate that represented shares of Common Stock that were issued and outstanding immediately prior to the Effective Time shall receive, upon surrender of such certificate, a new certificate evidencing and representing the number of whole shares of Common

Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined.

FOURTH: Thereafter, pursuant to a resolution by the Board, this Certificate of Amendment was submitted to the stockholders of the Corporation for their approval in accordance with the provisions of Section 211 and 242 of the DGCL. Accordingly, said proposed amendment has been adopted in accordance with Section 242 of the DGCL.

IN WITNESS WHEREOF, ARCA BIOPHARMA, INC. has caused this Certificate of Amendment to be signed by its duly authorized officer this _____ day of _____, 2018.

ARCA BIOPHARMA, INC.

By:

CHRISTOPHER D. OZEROFF

CERTIFICATE OF AMENDMENT
OF
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
ARCA BIOPHARMA, INC.

ARCA BIOPHARMA, INC., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the *DGCL*), does hereby certify:

FIRST: The name of the corporation is ARCA biopharma, Inc. (the *Corporation*).

SECOND: The date of filing of its original Certificate of Incorporation with the Secretary of State of the State of Delaware was March 16, 2004 under the name Nuvelo Merger Sub, Inc.

THIRD: The Board of Directors (the *Board*) of the Corporation, acting in accordance with the provisions of Sections 141 and 242 of the DGCL, adopted resolutions amending its Amended and Restated Certificate of Incorporation, as amended, as follows:

1. Article IV of the Amended and Restated Certificate of Incorporation of the Corporation is hereby amended to add the following provisions in their entirety to the existing provisions of Article IV:

Effective at 5:01 p.m. Eastern time, on the date of the filing of this Certificate of Amendment to the Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware (the *Effective Time*), the shares of the Corporation's Common Stock, par value \$0.001 per share, issued and outstanding immediately prior to the *Effective Time* and the shares of Common Stock issued and held in the treasury of the Corporation immediately prior to the *Effective Time* shall be combined into a smaller number of shares such that each 16 shares of issued and outstanding Common Stock immediately prior to the *Effective Time* are combined into one validly issued, fully paid and nonassessable share of Common Stock, par value \$0.001 per share. Notwithstanding the immediately preceding sentence, no fractional shares shall be issued and, in lieu thereof, upon surrender after the *Effective Time* of a certificate which formerly represented shares of Common Stock that were issued and outstanding immediately prior to the *Effective Time*, any person who would otherwise be entitled to a fractional share of Common Stock as a result of the combination, following the *Effective Time* (after taking into account all fractional shares of Common Stock otherwise issuable to such holder), shall be entitled to receive a cash payment equal to the fraction to which such holder would otherwise be entitled multiplied by the fair value of the Common Stock on the date of the *Effective Time*, as determined by the Board of Directors.

Each stock certificate that, immediately prior to the *Effective Time*, represented shares of Common Stock that were issued and outstanding immediately prior to the *Effective Time* shall, from and after the *Effective Time*, automatically and without the necessity of presenting the same for exchange, represent that number of whole shares of Common Stock after the *Effective Time* into which the shares of Common Stock formerly represented by such certificate shall have been combined (as well as the right to receive cash in lieu of fractional shares of Common Stock after the *Effective Time*), provided however, that each person of record holding a certificate that represented shares of Common Stock that were issued and outstanding immediately prior to the *Effective Time* shall receive, upon surrender of such certificate, a new certificate evidencing and representing the number of whole shares of Common

Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined.

FOURTH: Thereafter, pursuant to a resolution by the Board, this Certificate of Amendment was submitted to the stockholders of the Corporation for their approval in accordance with the provisions of Section 211 and 242 of the DGCL. Accordingly, said proposed amendment has been adopted in accordance with Section 242 of the DGCL.

IN WITNESS WHEREOF, ARCA BIOPHARMA, INC. has caused this Certificate of Amendment to be signed by its duly authorized officer this _____ day of _____, 2018.

ARCA BIOPHARMA, INC.

By:

CHRISTOPHER D. OZEROFF

CERTIFICATE OF AMENDMENT
OF
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
ARCA BIOPHARMA, INC.

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1. Article IV of the Amended and Restated Certificate of Incorporation of the Corporation is hereby amended to add the following provisions in their entirety to the existing provisions of Article IV:

Effective at 5:01 p.m. Eastern time, on the date of the filing of this Certificate of Amendment to the Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware (the *Effective Time*), the shares of the Corporation's Common Stock, par value \$0.001 per share, issued and outstanding immediately prior to the Effective Time and the shares of Common Stock issued and held in the treasury of the Corporation immediately prior to the Effective Time shall be combined into a smaller number of shares such that each 17 shares of issued and outstanding Common Stock immediately prior to the Effective Time are combined into one validly issued, fully paid and nonassessable share of Common Stock, par value \$0.001 per share. Notwithstanding the immediately preceding sentence, no fractional shares shall be issued and, in lieu thereof, upon surrender after the Effective Time of a certificate which formerly represented shares of Common Stock that were issued and outstanding immediately prior to the Effective Time, any person who would otherwise be entitled to a fractional share of Common Stock as a result of the combination, following the Effective Time (after taking into account all fractional shares of Common Stock otherwise issuable to such holder), shall be entitled to receive a cash payment equal to the fraction to which such holder would otherwise be entitled multiplied by the fair value of the Common Stock on the date of the Effective Time, as determined by the Board of Directors.

Each stock certificate that, immediately prior to the Effective Time, represented shares of Common Stock that were issued and outstanding immediately prior to the Effective Time shall, from and after the Effective Time, automatically and without the necessity of presenting the same for exchange, represent that number of whole shares of Common Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined (as well as the right to receive cash in lieu of fractional shares of Common Stock after the Effective Time), provided however, that each person of record holding a certificate that represented shares of Common Stock that were issued and outstanding immediately prior to the Effective Time shall receive, upon surrender of such certificate, a new certificate evidencing and representing the number of whole shares of Common

Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined.

FOURTH: Thereafter, pursuant to a resolution by the Board, this Certificate of Amendment was submitted to the stockholders of the Corporation for their approval in accordance with the provisions of Section 211 and 242 of the DGCL. Accordingly, said proposed amendment has been adopted in accordance with Section 242 of the DGCL.

IN WITNESS WHEREOF, ARCA BIOPHARMA, INC. has caused this Certificate of Amendment to be signed by its duly authorized officer this _____ day of _____, 2018.

ARCA BIOPHARMA, INC.

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CHRISTOPHER D. OZEROFF

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OF
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OF
ARCA BIOPHARMA, INC.

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Each stock certificate that, immediately prior to the *Effective Time*, represented shares of Common Stock that were issued and outstanding immediately prior to the *Effective Time* shall, from and after the *Effective Time*, automatically and without the necessity of presenting the same for exchange, represent that number of whole shares of Common Stock after the *Effective Time* into which the shares of Common Stock formerly represented by such certificate shall have been combined (as well as the right to receive cash in lieu of fractional shares of Common Stock after the *Effective Time*), provided however, that each person of record holding a certificate that represented shares of Common Stock that were issued and outstanding immediately prior to the *Effective Time* shall receive, upon surrender of such certificate, a new certificate evidencing and representing the number of whole shares of Common

Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined.

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ARCA BIOPHARMA, INC.

By:

CHRISTOPHER D. OZEROFF

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OF
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
ARCA BIOPHARMA, INC.

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CHRISTOPHER D. OZEROFF

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Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificate shall have been combined.

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IN WITNESS WHEREOF, ARCA BIOPHARMA, INC. has caused this Certificate of Amendment to be signed by its duly authorized officer this _____ day of _____, 2018.

ARCA BIOPHARMA, INC.

By:

CHRISTOPHER D. OZEROFF

Electronic Voting Instructions

Available 24 hours a day, 7 days a week!

Instead of mailing your proxy, you may choose one of the voting methods outlined below to vote your proxy.

VALIDATION DETAILS ARE LOCATED BELOW IN THE TITLE BAR.

Proxies submitted by the Internet or telephone must be received by 1:00 a.m., Mountain Time, on October 18, 2018.

Vote by Internet

Go to www.investorvote.com/ABIO

Or scan the QR code with your smartphone

Follow the steps outlined on the secure website

Vote by telephone

Call toll free 1-800-652-VOTE (8683) within the USA, US territories & Canada on a touch tone telephone

Follow the instructions provided by the recorded message

Using a **black ink** pen, mark your votes with an **X** as shown in this example. Please do not write outside the designated areas.

q **IF YOU HAVE NOT VOTED VIA THE INTERNET OR TELEPHONE, FOLD ALONG THE PERFORATION, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE.** q

A **Proposals** **The Board of Directors recommends a vote FOR Proposal 1.**

For Against Abstain

+

1.

Approval of a series of certificates of amendment to the Company's Restated Certificate of Incorporation, as amended, to effect a reverse split of the Company's outstanding common stock, pursuant to which any whole number of outstanding shares between, and including, three and twenty would be combined into one share of common stock and to authorize the Company's Board of Directors to select and file one such certificate of amendment and abandon the other certificates of amendment, or to abandon all such certificates of amendment as permitted under Section 242(c) of the Delaware General Corporation Law, to be determined by the Board of Directors within one year of approval.

In their discretion, the proxies are also authorized to vote upon such other matters as may properly come before the Special Meeting.

B Non-Voting Items

Change of Address Please print your new address below.

Comments Please print your comments below.

Meeting Attendance

Mark the box to the right if you plan to attend the Special Meeting.

C Authorized Signatures This section must be completed for your vote to be counted. **Date and Sign Below**

Please date and sign exactly as the name appears on this card. Joint owners should each sign. Please give full title when signing as executor, administrator, trustee, attorney, guardian for a minor, etc. Signatures for corporations and partnerships should be in the corporate or firm name by a duly authorized person.

/dd/yyyy) Please print date below. Signature 1 Please keep signature within the box. Signature 2 Please keep signature within



02WXS B

1 U P X

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**Important notice regarding the Internet availability of
proxy materials for the Special Meeting of Stockholders.**

q IF YOU HAVE NOT VOTED VIA THE INTERNET OR TELEPHONE, FOLD ALONG THE PERFORATION, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE.

q

Proxy ARCA BIOPHARMA, INC.

PROXY SOLICITED BY THE BOARD OF DIRECTORS OF ARCA BIOPHARMA, INC.

FOR THE SPECIAL MEETING OF STOCKHOLDERS TO BE HELD ON OCTOBER 18, 2018

The undersigned hereby acknowledges receipt of the Notice of Special Meeting of Stockholders and Proxy Statement of ARCA biopharma, Inc. (the Company) in connection with the Company's Special Meeting of Stockholders to be held at the Company's Headquarters, 11080 CirclePoint Road, Suite 140, Westminster, Colorado 80020 at 9:00 a.m., Mountain Time, on Thursday, October 18, 2018, and does hereby appoint Michael R. Bristow, M.D., Ph.D., Thomas A. Keuer and Christopher D. Ozeroff, and each of them (with full power to act alone), as proxies of the undersigned with all the powers the undersigned would possess if personally present and with full power of substitution in each of them, to appear and vote all shares of Common Stock of the Company which the undersigned would be entitled to vote if personally present at the 2018 Special Meeting of Stockholders, and at any postponement or adjournment thereof.

The shares represented hereby will be voted as directed herein. **IN EACH CASE, IF NO DIRECTION IS INDICATED, SUCH SHARES WILL BE VOTED FOR PROPOSAL 1. AS TO ANY OTHER MATTER THAT MAY PROPERLY COME BEFORE THE MEETING OR ANY POSTPONEMENT OR ADJOURNMENT THEREOF, SAID PROXY HOLDERS WILL VOTE IN ACCORDANCE WITH THEIR BEST JUDGMENT. THIS PROXY MAY BE REVOKED IN WRITING AT ANY TIME PRIOR TO THE VOTING THEREOF.**

PLEASE VOTE, DATE AND SIGN ON THE REVERSE SIDE AND RETURN PROMPTLY IN THE ENCLOSED ENVELOPE.

Please be sure to sign and date this Proxy.

Using a **black ink** pen, mark your votes with an **X** as shown in this example. Please do not write outside the designated areas.

Special Meeting Proxy Card

q PLEASE FOLD ALONG THE PERFORATION, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE. q

A Proposals The Board of Directors recommends a vote FOR Proposal 1.

+

For Against Abstain

1. Approval of a series of certificates of amendment to the Company's Restated Certificate of Incorporation, as amended, to effect a reverse split of the Company's outstanding common stock, pursuant to which any whole number of outstanding shares between, and including, three and twenty would be combined into one share of common stock and to authorize the Company's Board of Directors to select and file one such certificate of amendment and abandon the other certificates of amendment, or to abandon all such certificates of amendment as permitted under Section 242(c) of the Delaware General Corporation Law, to be determined by the Board of Directors within one year of approval.

In their discretion, the proxies are also authorized to vote upon such other matters as may properly come before the Special Meeting.

B Authorized Signatures This section must be completed for your vote to be counted. Date and Sign Below

Please date and sign exactly as the name appears on this card. Joint owners should each sign. Please give full title when signing as executor, administrator, trustee, attorney, guardian for a minor, etc. Signatures for corporations and partnerships should be in the corporate or firm name by a duly authorized person.

(mm/dd/yyyy) Please print date below. Signature 1 Please keep signature within the box. Signature 2 Please keep signature within



02WXTB

1 U P X

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**Important notice regarding the Internet availability of
proxy materials for the Special Meeting of Stockholders.**

q **PLEASE FOLD ALONG THE PERFORATION, DETACH AND RETURN THE BOTTOM PORTION IN
THE ENCLOSED ENVELOPE.** q

Proxy ARCA BIOPHARMA, INC.

PROXY SOLICITED BY THE BOARD OF DIRECTORS OF ARCA BIOPHARMA, INC.

FOR THE SPECIAL MEETING OF STOCKHOLDERS TO BE HELD ON OCTOBER 18, 2018

The undersigned hereby acknowledges receipt of the Notice of Special Meeting of Stockholders and Proxy Statement of ARCA biopharma, Inc. (the Company) in connection with the Company's Special Meeting of Stockholders to be held at the Company's Headquarters, 11080 CirclePoint Road, Suite 140, Westminster, Colorado 80020 at 9:00 a.m., Mountain Time, on Thursday, October 18, 2018, and does hereby appoint Michael R. Bristow, M.D., Ph.D., Thomas A. Keuer and Christopher D. Ozeroff, and each of them (with full power to act alone), as proxies of the undersigned with all the powers the undersigned would possess if personally present and with full power of substitution in each of them, to appear and vote all shares of Common Stock of the Company which the undersigned would be entitled to vote if personally present at the 2018 Special Meeting of Stockholders, and at any postponement or adjournment thereof.

The shares represented hereby will be voted as directed herein. **IN EACH CASE, IF NO DIRECTION IS INDICATED, SUCH SHARES WILL BE VOTED FOR PROPOSAL 1. AS TO ANY OTHER MATTER THAT MAY PROPERLY COME BEFORE THE MEETING OR ANY POSTPONEMENT OR ADJOURNMENT THEREOF, SAID PROXY HOLDERS WILL VOTE IN ACCORDANCE WITH THEIR BEST JUDGMENT. THIS PROXY MAY BE REVOKED IN WRITING AT ANY TIME PRIOR TO THE VOTING THEREOF.**

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Please be sure to sign and date this Proxy.