

Arch Therapeutics, Inc.
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Registration No. 333- 213878

PROSPECTUS SUPPLEMENT

(To Prospectus dated October 20, 2016)

Up to 10,166,664 Shares of Common Stock

Warrants to Purchase up to 5,591,664 Shares of Common Stock

We are offering an aggregate of 10,166,664 shares of common stock, par value \$0.001 per share (“**Common Stock**”), and warrants to purchase up to 5,591,664 shares of Common Stock. Each share of Common Stock is being sold together in a unit (a “**Unit**”) with 0.55 of a Series F Warrant (“**Series F Warrant**”) to purchase one share of our Common Stock for the combined purchase price of \$0.60 per Unit. The Series F Warrants are exercisable for five years from the date of issuance at an exercise price of \$0.75 per share. The shares of Common Stock and the Series F Warrants that comprise the Units are immediately separable and will be issued separately. This prospectus also registers the shares of Common Stock issuable upon the exercise of the Series F Warrants being offered.

Our Common Stock is currently quoted on the QB tier of the OTC Marketplace (“**OTCQB**”) under the symbol “**ARTH**”. On February 17, 2017, the closing price of our Common Stock was \$0.70 per share. We have no warrants, debt securities, subscription rights or units listed on any securities exchange or market.

Investing in our securities involves certain risks. Before buying any of our securities, you should read the discussion of material risks of investing in our Common Stock set forth in the section entitled “RISK FACTORS,” beginning on Page S-3 of this prospectus supplement, on Page 1 of the accompanying prospectus and in the documents incorporated by reference in this prospectus supplement.

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

Per Unit Total

| | | |
|--|--------|----------------|
| Public offering price | \$0.60 | \$6,099,998.40 |
| Proceeds to us, before expenses ⁽¹⁾ | \$0.60 | \$6,099,998.40 |

⁽¹⁾ The amount of the offering proceeds to us presented in this table does not give effect to any exercise of the Series F Warrants being issued in this offering.

The date of this prospectus supplement is FEBRUARY 21, 2017

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ABOUT THIS PROSPECTUS SUPPLEMENT

In this prospectus supplement, Arch Therapeutics, Inc. and its consolidated subsidiary, Arch Biosurgery, Inc., are referred to herein as “Arch,” “the Company,” “we,” “us” and “our,” unless the context indicates otherwise.

This prospectus supplement and the accompanying prospectus relate to the offering of Units comprised of a share of our Common Stock and 0.55 of Series F Warrants to purchase a share of our Common Stock. Before buying any of the Units offered hereby, we urge you to carefully read this prospectus supplement and the accompanying prospectus, together with the information incorporated herein by reference as described in the section entitled “**WHERE YOU CAN FIND MORE INFORMATION.**” These documents contain important information that you should consider when making your investment decision. This prospectus supplement contains information about the Units offered hereby and may add, update or change information in the accompanying prospectus.

You should rely only on the information that we have provided or incorporated by reference in this prospectus supplement and the accompanying prospectus. Neither we nor any of our affiliates have authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it.

We are not making offers to sell or solicitations to buy our securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. You should assume that the information in this prospectus supplement and the accompanying prospectus or any related free writing prospectus is accurate only as of the date on the front of the document and that any information that we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus supplement, the accompanying prospectus or any related free writing prospectus, or any sale of a security.

This document is in two parts. The first part is this prospectus supplement, which adds to and updates information contained in the accompanying prospectus. The second part, the prospectus, provides more general information, some of which may not apply to this offering. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement and the information contained in the accompanying prospectus, you should rely on the information in this prospectus supplement.

This prospectus supplement and the accompanying prospectus contain summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All

of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been or will be filed as exhibits to the registration statement of which this prospectus is a part or as exhibits to documents incorporated by reference herein, and you may obtain copies of those documents as described below in the section entitled “**WHERE YOU CAN FIND MORE INFORMATION.**”

Trademarks and Trade Names

This prospectus supplement contains references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus supplement, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend our use or display of other companies’ trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

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FORWARD-LOOKING STATEMENTS

This prospectus, including the documents incorporated by reference herein, contains forward-looking statements. In some cases, you can identify these statements by forward-looking words such as “may,” “might,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential” or “continue,” the negative or plural of these words and comparable terminology. These forward-looking statements, which are subject to risks, uncertainties and assumptions about us, may include projections of our future financial performance, our anticipated growth strategies and anticipated trends in our business. These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements, including those factors discussed under Item 1A, “Risk Factors,” in our Annual Report on Form 10-K for the fiscal year ended September 30, 2016 and any subsequent updates described in our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, all of which are incorporated herein by reference and may be amended, supplemented or superseded from time to time by other reports we file with the Securities and Exchange Commission (the “SEC”) in the future.

Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, level of activity, performance or achievements. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of any of these forward-looking statements. We are under no duty to update any of these forward-looking statements after the date of this prospectus to conform our prior statements to actual results or revised expectations.

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PROSPECTUS SUPPLEMENT SUMMARY

*This summary highlights selected information about us and this offering. This summary is not complete and may not contain all of the information that is important to you. We encourage you to read this prospectus supplement and the accompanying prospectus, including the information under the section entitled “**RISK FACTORS**” and the information we incorporate by reference, in its entirety.*

Our Company

We are a biotechnology company in the development stage. We have generated no revenues to date and are devoting substantially all of our operational efforts to the development of our core technology. We aim to develop products that make surgery and interventional care faster and safer by using a novel approach to stop bleeding (referenced as “**hemostatic**” or “**hemostasis**”), control leaking (referenced as “**sealant**” or “**sealing**”), and provide other advantages during surgery and trauma care. Our core technology is based on self-assembling peptides that creates a physical, mechanical barrier, which could be applied to seal organs or wounds that are leaking blood and other fluids. We believe our technology could support an innovative platform of potential products in the field of stasis and barrier applications. Our plan and business model is to develop products that apply that core technology for use with bodily fluids and tissues.

Our primary product candidates, known collectively as the AC5 Devices™ (which we sometimes refer to as “**AC5™**”, “**AC5 Surgical Hemostatic Device™**”, “**AC5 Surgical Hemostat™**”, “**AC5 Topical Hemostatic Device™**”, or “**AC5 Topical Hemostat™**”), are being designed to achieve hemostasis in surgical procedures. They rely on our self-assembling peptide technology and are being designed to achieve hemostasis in skin wounds and in minimally invasive and open surgical procedures. We intend to develop other product candidates based on our technology platform for use in a range of indications.

AC5 is being designed as a product containing synthetic biocompatible peptides comprising L amino acids, commonly referred to as naturally occurring amino acids. When applied to a wound, AC5 intercalates into the interstices of the connective tissue where it self-assembles into a physical, mechanical nanoscale structure that provides a barrier to leaking substances, such as blood. AC5 may be applied directly as a liquid, which we believe will make it user-friendly and able to conform to irregular wound geometry. Additionally, AC5 does not possess sticky or glue-like handling characteristics, which we believe will enhance its utility in several settings, including minimally invasive surgical procedures. Further, in certain settings, AC5 lends itself to a concept that we call Crystal Clear Surgery™; the transparency and physical properties of AC5 may enable a surgeon to operate through it in order to maintain a clearer field of vision and prophylactically stop or lessen bleeding as it starts.

Corporate Information

We were incorporated under the laws of the State of Nevada on September 16, 2009 as Almah, Inc. On May 10, 2013, we entered into an Agreement and Plan of Merger (the “**Merger Agreement**”) with Arch Biosurgery, Inc., a private Massachusetts corporation (“**ABS**”) and Arch Acquisition Corporation, our wholly owned subsidiary formed for the purpose of the transaction, pursuant to which Arch Acquisition Corporation merged with and into ABS and ABS thereby became our wholly owned subsidiary (the “**Merger**”). The Merger closed on June 26, 2013. In contemplation of the Merger, we changed our name from Almah, Inc. to Arch Therapeutics, Inc. Our principal executive offices are located at 235 Walnut St., Suite 6, Framingham, Massachusetts 01702. The telephone number of our principal executive offices is (617) 431-2313. Our website address is <http://www.archtherapeutics.com>. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this document.

S-1

The Offering

Issuer Arch Therapeutics, Inc.

Securities offered by us We are offering an aggregate of 10,166,664 shares of Common Stock and Series F Warrants to purchase up to 5,591,664 shares of Common Stock. Each share of Common Stock is being sold together in a Unit with 0.55 of a Series F Warrant to purchase one share of our Common Stock for the combined purchase price of \$0.60 per Unit. The shares of Common Stock and the Series F Warrants that comprise the Units are immediately separable and will be issued separately. This prospectus also registers the shares of Common Stock issuable upon the exercise of the Series F Warrants being offered.

Common Stock outstanding immediately prior to this offering⁽¹⁾ 140,495,712 shares

Common Stock outstanding immediately after this offering⁽²⁾ 150,662,376 shares

Warrants we are offering As part of the Units to be sold in this offering, we are offering Series F Warrants to purchase up to 5,591,664 shares of Common Stock that will be exercisable for five years from the date of issuance at an exercise price of \$0.75 per share, subject to adjustment. This prospectus supplement also relates to the offering of the shares of Common Stock issuable upon exercise of the Series F Warrants. There is presently no public market for the Series F Warrants we are offering by means of this prospectus supplement. It is not anticipated that a public market for the Series F Warrants will develop in the future.

Use of proceeds We estimate that the net proceeds from this offering (exclusive of any proceeds resulting from the exercise of the Series F Warrants) will be approximately \$5,900,000 after deducting estimated offering expenses of \$200,000 payable by us.

A portion of the proceeds that we may receive in the offering may be used to satisfy our indebtedness to the Massachusetts Life Sciences Center (“MLSC”) under the Life Sciences Accelerator Funding Agreement that we entered into with MLSC on September 30, 2013 and amended on September 28, 2016 (as amended, the “MLSC Loan Agreement”). In particular, in the event that we receive minimum net proceeds of at least \$5,000,000 in this offering, we will be required to immediately repay the remaining principal and accrued interest under the MLSC Loan Agreement, which as of February 17, 2017 was approximately \$825,000.

We intend to use any net proceeds from this offering that are not allocated to repaying our indebtedness under the MLSC Loan Agreement primarily for working capital and general corporate purposes, and have not allocated specific amounts of any such expected net proceeds from this offering for any specific purposes. See the section of this prospectus supplement entitled “**USE OF PROCEEDS.**”

Risk Factors Investing in our Common Stock and Series F Warrants involves a high degree of risk, and the purchasers of our Common Stock and Series F Warrants may lose all or part of their investment. Before deciding to invest in our securities, please carefully read the section of this prospectus supplement entitled “**RISK FACTORS,**” including the risks incorporated therein from our Annual Report on Form 10-K for the fiscal year ended September 30, 2016 and our other periodic reports filed with the SEC and incorporated by reference herein and the Risk Factors in the accompanying prospectus.

OTCQB symbol “ARTH”

This number is based on 140,495,712 shares outstanding as of February 17, 2017, which includes 23,168,383 shares of Common Stock held by our affiliates. Excludes (i) 16,076,741 shares of Common Stock that are reserved for future issuance under our 2013 Stock Incentive Plan (the “**2013 Plan**”), of which 14,794,214 shares are subject to outstanding option awards granted under the 2013 Plan at exercise prices ranging from \$0.17 to \$0.72 per share and with a weighted average exercise price of \$0.38 per share; (ii) 145,985 shares of Common Stock issuable upon (1) the exercise of outstanding warrants issued in connection with the MLSC Loan Agreement, with an exercise price of \$0.274 per share (the “**MLSC Warrant**”); (iii) 25,000 shares of Common Stock issuable upon the exercise of the Company’s outstanding Series A Warrants with an exercise price of \$0.20 per share; (iv) 10,338,026 shares of Common Stock issuable upon the exercise of the Company’s outstanding Series D Warrants with an exercise price of \$0.25 per share; and (v) 5,983,323 shares of Common Stock issuable upon the exercise of the Company’s outstanding Series E Warrants with an exercise price of \$0.438 per share.

(2) This number is based on 140,495,712 shares outstanding as of February 17, 2017, which includes 23,168,383 shares of Common Stock held by our affiliates. Excludes (i) 16,076,741 shares of Common Stock that are reserved for future issuance under our 2013 Stock Incentive Plan (the “**2013 Plan**”), of which 14,794,214 shares are subject to outstanding option awards granted under the 2013 Plan at exercise prices ranging from \$0.17 to \$0.72 per share and with a weighted average exercise price of \$0.38 per share; (ii) 145,985 shares of Common Stock issuable upon the exercise of the MLSC Warrant with an exercise price of \$0.274 per share; (iii) 25,000 shares of Common Stock issuable upon the exercise of the Company’s outstanding Series A Warrants with an exercise price of \$0.20 per share; (iv) 10,338,026 shares of Common Stock issuable upon the exercise of the Company’s outstanding Series D Warrants with an exercise price of \$0.25 per share; and (v) 5,983,323 shares of Common Stock issuable upon the exercise of the Company’s outstanding Series E Warrants with an exercise price of \$0.438 per share; and (vi) 5,591,664 shares of Common Stock issuable upon the exercise of the Series F Warrants sold in this offering with an exercise price of \$0.75 per share.

RISK FACTORS

*An investment in our securities involves a high degree of risk. Prior to making a decision about investing in our securities, you should carefully consider the risks, uncertainties and assumptions discussed under Item 1A, "Risk Factors," in our Annual Report on Form 10-K for the fiscal year ended September 30, 2016 and any subsequent updates described in our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, all of which are incorporated herein by reference and may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future, together with information in this prospectus and any other information incorporated by reference into this prospectus, including the risk factors set forth below. See the section of this prospectus supplement entitled "**WHERE YOU CAN FIND MORE INFORMATION.**" Additional risks and uncertainties not presently known to us, or that we currently see as immaterial, may also harm our business. If any of these risks occur, our business, financial condition and operating results could be harmed, the trading price of our common stock could decline and you could lose part or all of your investment.*

*This prospectus supplement also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks faced by us described below and elsewhere in this prospectus. See the section of this prospectus supplement entitled "**FORWARD-LOOKING STATEMENTS**" for information relating to these forward-looking statements.*

Risks Related to this Offering

Management will have broad discretion as to the use of the proceeds from this offering, and we may not use the proceeds effectively.

A portion of the proceeds that we may receive in the offering may be used to satisfy our indebtedness to MLSC under the MLSC Loan Agreement. In particular, in the event that we receive minimum net proceeds of at least \$5,000,000 in this offering, we will be required to immediately repay the remaining principal and accrued interest under the MLSC Loan Agreement, which as of February 17, 2017 was approximately \$825,000.

We intend to use any net proceeds from this offering that are not allocated to repaying our indebtedness under the MLSC Loan Agreement primarily for working capital and general corporate purposes, and have not allocated specific amounts of any such expected net proceeds from this offering for any specific purposes. Accordingly, aside from any

mandatory payments to MLSC in connection with the MLSC Loan Agreement, our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our Common Stock. You will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the net proceeds are being used appropriately. It is possible that the net proceeds will be invested in a way that does not yield a favorable, or any, return for us. Our failure to apply these funds effectively could have a material adverse effect on our business and cause the price of our Common Stock to decline.

You will experience immediate and substantial dilution in the net tangible book value of the Common Stock you purchase in this offering.

Since the public offering price of the securities offered pursuant to this prospectus supplement and the accompanying prospectus is higher than the net tangible book value per share of our Common Stock, you will incur substantial dilution in the net tangible book value of the Common Stock you purchase in this offering. After giving effect to the sale of 10,166,664 shares of Common Stock together with Series F Warrants to purchase 5,591,664 shares of Common Stock, and after deducting offering expenses of \$200,000 payable by us, if you purchase securities in this offering, you will incur immediate and substantial dilution of approximately \$0.544 per share in the net tangible book value of the Common Stock you acquire based on our net tangible book value as of December 31, 2016, on a pro-forma basis as described in the section entitled “**DILUTION**” on Page S-5.

In the event that any of the Series F Warrants sold in this offering are exercised, you will experience additional dilution to the extent that the exercise price of those Series F Warrants is higher than the net tangible book value of our Common Stock at the time of exercise.

A substantial number of shares of our Common Stock may be sold in this offering, which could cause the price of our Common Stock to decline.

In addition to the shares of Common Stock to be sold in this offering, the investors in this offering will receive Series F Warrants to purchase 55% of the number of shares such investors purchased in this offering. This sale and any future sales of a substantial number of shares of our Common Stock in the public market, or the perception that such sales may occur, could adversely affect the price of our Common Stock on the OTCQB marketplace. We cannot predict the effect, if any, that market sales of those shares of Common Stock or the availability of those shares of Common Stock for sale will have on the market price of our Common Stock.

The investors in this offering may be diluted by exercises of outstanding options and warrants.

As of February 17, 2017, we had outstanding options to purchase an aggregate of 14,794,214 shares of our Common Stock at exercise prices ranging from \$0.17 to \$0.72 per share and with a weighted average exercise price of \$0.38 per share, and 145,985 shares of Common Stock issuable upon the exercise of the MLSC Warrant with an exercise price of \$0.274 per share, 25,000 shares of Common Stock issuable upon the exercise of the Company's outstanding Series A Warrants with an exercise price of \$0.20 per share, 10,338,026 shares of Common Stock issuable upon the exercise of the Company's outstanding Series D Warrants with an exercise price of \$0.25 per share, and 5,983,323 shares of Common Stock issuable upon the exercise of the Company's outstanding Series E Warrants with an exercise price of \$0.438 per share. We will be issuing to the purchasers in this offering an additional 5,591,664 Series F Warrants with an exercise price exercise price of \$0.75 per share. The exercise of such outstanding options and warrants will result in dilution of the value of our shares.

There is no public market for the Series F Warrants being offered, and we do not anticipate such a market ever developing in the future.

There is no established public trading market for the Series F Warrants being offered by us in this offering and we do not intend to have the Series F Warrants listed on a national securities exchange or any other recognized trading system in the future. Without an active market, the liquidity of the Series F Warrants will be limited.

The Series F Warrants being offered may not have value.

The Series F Warrants being offered by us in this offering have an exercise price of \$0.75 per share and expire five years from the date of issuance. In the event that the market price of our Common Stock does not exceed the exercise price of the Series F Warrants during the period when the Series F Warrants are exercisable, the Series F Warrants may not have any value.

Holders of our Series F Warrants will have no rights as shareholders until they acquire shares of our Common Stock, if ever.

If you acquire Series F Warrants to purchase shares of our Common Stock in this offering, you will have no rights with respect to our Common Stock until you acquire shares of such Common Stock upon exercise of your Series F Warrants. Upon exercise of your Series F Warrants, you will be entitled to exercise the rights of a common shareholder only as to matters for which the record date occurs after the exercise date.

The price of our Common Stock has been and could remain volatile, and the market price of our Common Stock may decrease.

The market price of our Common Stock has historically experienced and may continue to experience significant volatility. From June 30, 2016 through January 31, 2017, the closing price of our Common Stock has fluctuated from a high of \$0.89 per share to a low of \$0.55 in the quarter ended September 30, 2016. The volatile nature of our Common Stock per share price may cause investment losses for our stockholders. In addition, the market price of stock in small capitalization biotechnology companies is often driven by investor sentiment, expectation and perception, all of which may be independent of fundamental valuation metrics or traditional financial performance metrics, thereby exacerbating volatility. In addition, our Common Stock is quoted on the QB tier of the OTC Marketplace, which may increase price quotation volatility and could limit liquidity, all of which may adversely affect the market price of our shares.

Our Common Stock is classified as “penny stock” and trading of our shares may be restricted by the SEC’s penny stock regulations.

Rules 15c-1 through 15c-9 promulgated under the Securities Exchange Act of 1934 (the “**Exchange Act**”) impose sales practice and disclosure requirements on certain brokers-dealers who engage in transactions involving a “penny stock.” The SEC has adopted regulations which generally define “penny stock” to be any equity security that has a market price of less than \$5.00 per share or an exercise price of less than \$5.00 per share, subject to certain exceptions. Our Common Stock is covered by the penny stock rules, which impose additional sales practice requirements on broker-dealers who sell to persons other than established customers and “accredited investors.” The penny stock rules require a broker-dealer, prior to a transaction in a penny stock not otherwise exempt from the rules, to deliver a standardized risk disclosure document in a form prepared by the SEC which provides information about penny stocks and the nature and level of risks in the penny stock market. The broker-dealer also must provide the customer with current bid and offer quotations for the penny stock, the compensation of the broker-dealer and its salesperson in the transaction, and monthly account statements showing the market value of each penny stock held in the customer’s account. In addition, the penny stock rules require that, prior to a transaction in a penny stock that is not otherwise exempt, the broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser’s written agreement to the transaction. These disclosure requirements may have the effect of reducing the level of trading activity in the secondary market for stock that is subject to these penny stock rules. Consequently, these penny stock rules may affect the ability of broker-dealers to trade our securities. We believe that the penny stock rules may discourage investor interest in and limit the marketability of our Common Stock.

Our Common Stock is not listed on a national securities exchange and, as a result, compliance with applicable state securities laws may be required for subsequent offers, transfers and sales of the shares of Common Stock and Series F Warrants offered hereby.

The shares of our Common Stock and the Series F Warrants offered hereby are being offered only in a limited number of states in which we have either registered and/or qualified the Common Stock and Series F Warrants for sale or pursuant to one or more exemptions from such registration and qualification requirements. We have not registered or qualified the shares of Common Stock and the Series F Warrants offered hereby for subsequent offer, transfer or sale in any state. Because our Common Stock is not listed on a national securities exchange, subsequent transfers of the shares of our Common Stock and Series F Warrants offered hereby by U.S. holders may not be exempt from state securities laws. In such event, it will be the responsibility of the holder of shares or Series F Warrants to register or qualify the shares or the Series F Warrants for any subsequent offer, transfer or sale in the United States or to determine that any such offer, transfer or sale is exempt under applicable state securities laws.

USE OF PROCEEDS

A portion of the proceeds that we may receive in the offering may be used to satisfy our indebtedness to MLSC under the MLSC Loan Agreement. In particular, although the maturity date of the MLSC Loan is October 3, 2017, in the event that we receive minimum net proceeds of at least \$5,000,000 in this offering, we will be required to immediately repay the remaining principal and accrued interest under the MLSC Loan Agreement, which as of February 17, 2017 was approximately \$825,000. The remaining principal and accrued interest under the MLSC Loan Agreement currently bears interest at 7.0% per annum.

We intend to use any net proceeds from this offering that are not allocated to repaying our indebtedness under the MLSC Loan Agreement primarily for working capital and general corporate purposes, and have not allocated specific amounts of any such expected net proceeds from this offering for any specific purposes. As a result, our management will have broad discretion to allocate the net proceeds from this offering.

DILUTION

The net tangible book value of our Common Stock on December 31, 2016 was approximately \$2.4 million or approximately \$0.017 per share, based on 138,182,075 shares of our Common Stock outstanding as of December 31, 2016. After giving effect to (i) the exercise of 363,637 Series D Warrants and 200,000 Series E Warrants for aggregate net proceeds of approximately \$178,500 that occurred since December 31, 2016 and through February 17, 2017 (the “**Warrant Exercises**”); and (ii) the grant of 1,750,000 shares of restricted stock under the 2013 Plan to our officers and directors (the “**Compensatory Grants**”), the net tangible book value of our Common Stock on December 31, 2016 would have been approximately \$2.6 million or approximately \$0.018 per share. We calculate net tangible book value per share by subtracting our total liabilities from our total tangible assets and dividing the difference by the number of outstanding shares of our Common Stock. Dilution in net tangible book value per share to the new investors represents the difference between the amount per share paid by purchasers of shares of our Common Stock in this offering and the net tangible book value per share of our Common Stock immediately afterwards.

The investors participating in this offering will incur immediate and significant dilution. After giving effect to the issuance and sale of shares of our Common Stock and Series F Warrants in this offering at a public offering price of \$0.60 per Unit comprised of one share of our Common Stock and 0.55 of one Series F Warrant to purchase a share of Common Stock, after deducting the estimated offering expenses of \$200,000 payable by us, our as adjusted net tangible book value as of December 31, 2016 would have been approximately \$8.5 million, or approximately \$0.056 per share of our Common Stock.

This represents an immediate increase in net tangible book value of approximately \$0.038 per share to existing stockholders and immediate dilution in net tangible book value of \$0.544 per share to the new investors purchasing our Common Stock in this offering at the public offering price.

The following table illustrates this per share dilution:

| | |
|--|-------------|
| Public offering price per Unit | \$0.60 |
| Net tangible book value per share as of December 31, 2016 | \$0.017 |
| Pro forma net tangible book value per share as of December 31, 2016, after giving effect to the Warrant Exercises and the Compensatory Grants ⁽¹⁾ | \$0.018 |
| Increase in net tangible book value per share attributable to this offering | \$5,900,000 |
| Pro forma net tangible book value per share as of December 31, 2016 after giving effect to this offering, the Warrant Exercises, the Compensatory Grants and the Offering Expenses | \$0.056 |
| Dilution per share to the new investors in this offering | \$0.544 |

Between December 31, 2016 and February 17, 2017, (i) 363,637 Series D Warrants and 200,000 Series E Warrants (1) were exercised for aggregate net proceeds of approximately \$178,500; and (ii) 1,750,000 shares of restricted stock were granted to our officers and directors under the 2013 Plan as compensatory equity grants.

The table above excludes the following:

- 14,794,214 shares are subject to outstanding option awards granted under the 2013 Plan at exercise prices ranging from \$0.17 to \$0.72 per share and with a weighted average exercise price of \$0.38 per share;
- 145,985 shares of Common Stock issuable upon the exercise of the MLSC Warrant with an exercise price of \$0.274 per share; ”
- 25,000 shares of Common Stock issuable upon the exercise of the Company’s outstanding Series A Warrants with an exercise price of \$0.20 per share
- 10,338,026 shares of Common Stock issuable upon the exercise of the Company’s outstanding Series D Warrants with an exercise price of \$0.25 per share
- 5,983,323 shares of Common Stock issuable upon the exercise of the Company’s outstanding Series E Warrants with an exercise price of \$0.438 per share; and
- 5,591,664 shares of Common Stock issuable upon the exercise of the Series F Warrants sold in this offering with an exercise price of \$0.75 per share.

DESCRIPTION OF OF THE SECURITIES WE ARE OFFERING

General

Effective May 24, 2013, we amended our Articles of Incorporation to increase our authorized Common Stock from 75,000,000 shares to 300,000,000 shares. Other than our Common Stock, we have no other class or series of authorized capital stock.

As of February 17, 2017, we had 140,495,712 shares of Common Stock issued and outstanding.

The additional shares of our authorized stock available for issuance may be issued at times and under circumstances so as to have a dilutive effect on earnings per share and on the equity ownership of the holders of our Common Stock. The ability of our Board of Directors (the “**Board**”) to issue additional shares of stock could enhance the Board’s ability to negotiate on behalf of the stockholders in a takeover situation but could also be used by the Board to make a change-in-control more difficult, thereby denying stockholders the potential to sell their shares at a premium and entrenching current management. The following description is a summary of the material provisions of our capital stock. You should refer to our Articles of Incorporation, as amended, and amended and restated bylaws, both of which are on file with the SEC as exhibits to previous SEC filings, for additional information. The summary below is qualified by provisions of applicable law.

common stock

The holders of our Common Stock, par value \$0.001 per share, are entitled to one vote per share on all matters submitted to a vote of our stockholders, including the election of directors. Our Articles of Incorporation do not provide for cumulative voting in the election of directors, and our amended and restated bylaws provide that directors are elected by a plurality vote of the votes cast and entitled to vote on the election of directors at any meeting for the election of directors at which a quorum is present. Matters other than the election of directors to be voted on by stockholders are generally approved if, at a duly convened stockholder meeting, the number of votes cast in favor of the action exceeds the number of votes cast in opposition to the action, unless a different vote for the action is required by applicable law, our Articles of Incorporation or our amended and restated bylaws. Applicable Nevada law requires any amendment to our Articles of Incorporation to be approved by stockholders holding shares entitling them to exercise at least a majority of the voting power of the Company. The holders of our Common Stock will be entitled to cash dividends as may be declared, if any, by the Board from funds available. Upon liquidation, dissolution or

winding up of our Company, the holders of our Common Stock (the “**Common Stockholders**”) will be entitled to receive pro rata all assets available for distribution to the holders. All rights of our Common Stockholders described in this paragraph could be subject to any preferential voting, liquidation or other rights of any series of preferred stock that we may authorize and issue in the future. Our Common Stock is presently traded on the QB tier of the OTC Marketplace under the trading symbol “**ARTH**”.

Description of Series F Warrants

Form. The Series F Warrants will be issued as individual warrant agreements to the investors. The material terms and provisions of the Series F Warrants offered hereby are summarized below. The following description is subject to, and qualified in its entirety by, the form of Series F Warrant, which was or will be filed with the SEC as an exhibit to a Current Report on Form 8-K in connection with this offering. You should review a copy of the form of Series F Warrant for a complete description of the terms and conditions applicable to the Series F Warrants.

Exercisability. The Series F Warrants are exercisable beginning on the date of issuance, and at any time up to five (5) years from the date of issuance. The Series F Warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice followed by, within three trading days following the date of exercise, payment in full for the number of shares of our Common Stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). No fractional shares of Common Stock will be issued in connection with the exercise of a Series F Warrant. In lieu of fractional shares, we will, at our option, either (i) pay the holder an amount in cash equal to the fractional amount multiplied by the market value of a share of Common Stock; or (ii) round up to the next whole share. The Series F Warrants provide that they shall not be exercisable in the event and to the extent that the exercise thereof would result in the holder of the Series F Warrant, together with its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder’s, would be deemed to beneficially own more than 4.99% of the Common Stock immediately after giving effect to the exercise of the Series F Warrant; *provided, however*, the holder, upon notice to us, may increase or decrease the ownership limitation, *provided that* any increase is limited to a maximum of 9.99% of the Company’s Common Stock, and any increase in the ownership limitation will not become effective until the 61st day after delivery of such notice.

Cashless Exercise. If, at any time during the term of the Series F Warrants, the issuance of shares of our Common Stock upon exercise of the Series F Warrants is not covered by an effective registration statement, the holder is permitted to effect a cashless exercise of the Series F Warrants (in whole or in part) by having the holder deliver to us a duly executed exercise notice, canceling a portion of the Series F Warrant in payment of the purchase price payable in respect of the number of shares of our Common Stock purchased upon such exercise.

Exercise Price. Each Series F Warrant represents the right to purchase a share of Common Stock at an exercise price equal to \$0.75 per share, subject to adjustment as described below. The exercise price is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our Common Stock.

Transferability. Subject to applicable laws, the Series F Warrants may be offered for sale, sold, transferred or assigned without our consent.

Exchange Listing. There is no public trading market for the Series F Warrants, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the Series F Warrants on any securities exchange or other trading system.

Rights as a Stockholder. Except as otherwise provided in the Series F Warrants or by virtue of such holder's ownership of shares of our Common Stock, the holder of a Series F Warrant does not have the rights or privileges of a holder of our Common Stock, including any voting rights, until the holder exercises the Series F Warrant.

Optional Payment upon a Fundamental Transaction. If the Company undergoes a change of control or is involved in a similar transaction, the holder may cause the Company or any successor entity to purchase its Series F Warrant for an amount of cash equal to \$0.18 for each share of Common Stock underlying the Series F Warrant.

Transfer Agent and Registrar

The transfer agent for our common stock is Empire Stock Transfer. Our transfer agent's address is 1859 Whitney Mesa Drive, Henderson, Nevada 89014.

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PLAN OF DISTRIBUTION

We have arranged for the sale of the Units we are offering pursuant to this prospectus supplement to one or more institutional investors, “accredited investors” (as that term is defined in Rule 501(a) of Regulation D under the Securities Act of 1933, as amended (the “**Securities Act**”)) and/or existing securityholders, through a securities purchase agreement with the investors. All of the Units will be sold at the same price and, we expect, at a single closing.

We established the price for the Units following negotiations with prospective investors and with reference to the prevailing market price of our Common Stock, recent trends in such price and other factors. It is possible that not all of the Units we are offering pursuant to this prospectus supplement will be sold at the closing, in which case our net proceeds would be reduced. We expect that the sale of the Units will be completed on or shortly following the date indicated on the cover page of this prospectus supplement.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, the validity of the securities offered hereby will be passed upon for us by McDonald Carano Wilson LLP, Reno, Nevada.

EXPERTS

The consolidated financial statements of Arch Therapeutics, Inc. and its consolidated subsidiary, Arch Biosurgery, Inc. as of September 30, 2016 and 2015, and for each of the years then ended, have been audited by Moody, Famiglietti & Andronico, LLP, an independent registered public accounting firm as stated in their report dated December 5, 2016 which is incorporated herein by reference. Such consolidated financial statements have been incorporated herein by reference in reliance on the report of such firm, given upon their authority as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read or obtain a copy of these reports at the SEC’s public reference room at 100 F Street, N.E., Washington, D.C. 20549, on

official business days during the hours of 10:00 am to 3:00 pm. You may obtain information on the operation of the public reference room and its copy charges by calling the SEC at 1-800-SEC-0330. The SEC maintains a website, at <http://www.sec.gov>, that contains registration statements, reports, proxy information statements and other information regarding registrants that file electronically with the SEC, including us. Our website address is <http://www.archtherapeutics.com>. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this document.

The SEC allows us to “incorporate by reference” information that we file with it into this prospectus, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede information contained in this prospectus and any accompanying prospectus supplement.

We incorporate by reference the documents listed below that we have previously filed with the SEC, each of which has Exchange Act File No. 000-54986 unless otherwise noted:

- our Annual Report on Form 10-K for the fiscal year ended September 30, 2016, filed with the SEC on December 5, 2016;
- our Quarterly Report on Form 10-Q for the quarter ended December 31, 2016, which was filed with the SEC on February 1, 2016;
- our Current Report on Form 8-K filed with the SEC on October 31, 2016; and
- the description of our common stock as set forth under the caption “Description of Securities” in our Registration Statement on Form S-1/A (File No. 333-178883), as amended and filed with the SEC on February 24, 2012, including any amendments thereto or reports filed for the purposes of updating this description (including our Current Report on Form 8-K filed with the SEC on June 26, 2013 (File No. 333-178883)).

All reports and other documents that we file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus but before the termination of the offering of the securities hereunder will also be considered to be incorporated by reference into this prospectus from the date of the filing of these reports and documents, and will supersede the information herein; *provided, however*, that all reports, exhibits and other information that we “furnish” to the SEC will not be considered incorporated by reference into this prospectus. Any statement contained in a document incorporated by reference in this prospectus or any prospectus supplement shall be deemed to be modified or superseded to the extent that a statement contained herein, therein or in any other subsequently filed document that also is incorporated by reference herein or therein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus or any prospectus supplement.

We will provide you without charge, upon your oral or written request, with a copy of any or all reports, proxy statements and other documents we file with the SEC, as well as any or all of the documents incorporated by reference in this prospectus or the registration statement (other than exhibits to such documents unless such exhibits are specifically incorporated by reference into such documents). Requests for such copies should be directed to:

Arch Therapeutics, Inc.

235 Walnut St., Suite 6

Framingham, MA 01702

(617) 431-2313

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PROSPECTUS

\$50,000,000

Common Stock

Warrants

Debt Securities

Subscription Rights

Units

We may offer and sell an indeterminate number of shares of our common stock, warrants, debt securities and subscription rights from time to time under this prospectus. We may offer these securities separately or as units, which may include combinations of the securities. We will describe in a prospectus supplement the securities we are offering and selling, as well as the specific terms of the securities.

We may offer these securities in amounts, at prices and on terms determined at the time of offering. We may sell the securities directly to you, through agents we select, or through underwriters and dealers we select. If we use agents, underwriters or dealers to sell the securities, we will name them and describe their compensation in a prospectus supplement.

Our common stock is currently quoted on the QB tier of the OTC Marketplace (“**OTCQB**”) under the symbol “**ARTH**”. On October 14, 2016, the closing price of our common stock was \$0.62 per share. We have no warrants, debt securities, subscription rights or units listed on any securities exchange or market.

Investing in our securities involves certain risks. See “RISK FACTORS” beginning on Page 1 of this prospectus and in the applicable prospectus supplement for certain risks you should consider. You should read the entire prospectus carefully before you make your investment decision.

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

The date of this prospectus is October 20, 2016

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (the “SEC”) utilizing a “shelf” registration process. Under this shelf process, we may sell any combination of the securities described in this prospectus in one or more offerings. This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described under the heading “**WHERE YOU CAN FIND MORE INFORMATION.**”

We have not authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information contained in or incorporated by reference in this prospectus or any prospectus supplement is accurate as of any date other than their respective dates.

FORWARD-LOOKING STATEMENTS

This prospectus, including the documents incorporated by reference herein, contains forward-looking statements. In some cases, you can identify these statements by forward-looking words such as “may,” “might,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential” or “continue,” the negative or plural of these words and comparable terminology. These forward-looking statements, which are subject to risks, uncertainties and assumptions about us, may include projections of our future financial performance, our anticipated growth strategies and anticipated trends in our business. These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements, including those factors discussed under the caption entitled “Risk Factors” in our Annual Report on Form 10-K for the year ended September 30, 2015.

Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, level of activity, performance or achievements. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of any of these forward-looking statements. We are under no duty to update any of these forward-looking statements after the date of this prospectus to conform our prior statements to actual results or revised expectations.

II

PROSPECTUS SUMMARY

Our Company

We are a biotechnology company in the development stage with limited operations to date. We aim to develop products that make surgery and interventional care faster and safer by using a novel approach that stops bleeding (referenced as “**hemostatic**” or “**hemostasis**”), controls leaking (referenced as “**sealant**” or “**sealing**”), and provides other advantages during surgery and trauma care. Our core technology is based on a self-assembling peptide that creates a physical, mechanical barrier, which could be applied to seal organs or wounds that are leaking blood and other fluids. We believe our technology could support an innovative platform of potential products in the field of stasis and barrier applications. Our lead product candidate, the AC5 Surgical Hemostatic Device™ (which we sometimes refer to as “**AC5™**”), is designed to achieve hemostasis in minimally invasive and open surgical procedures, and we hope to develop other hemostatic or sealant product candidates in the future based on our self-assembling peptide technology platform. Our plan and business model is to develop products that apply that core technology to use with human bodily fluids and connective tissues.

AC5 is designed to be a biocompatible synthetic peptide comprising naturally occurring amino acids. When applied to a wound, AC5 intercalates into the interstices of the connective tissue where it self-assembles into a physical, mechanical structure that provides a barrier to leaking substances, such as blood. AC5 is designed for direct application as a liquid, which we believe will make it user-friendly and able to conform to irregular wound geometry. Additionally, AC5 is not sticky or glue-like, which we believe will enhance its utility in the setting of minimally invasive and laparoscopic surgeries. Further, in certain settings, AC5 lends itself to a concept that we call Crystal Clear Surgery™ because the transparency and physical properties of AC5 enable a surgeon to operate through it in order to maintain a clearer field of vision and prophylactically stop or lessen bleeding as it starts.

Corporate Information

We were incorporated under the laws of the State of Nevada on September 16, 2009 as Almah, Inc. On May 10, 2013, we entered into an Agreement and Plan of Merger (the “**Merger Agreement**”) with Arch Biosurgery, Inc., a private Massachusetts corporation (“**ABS**”) and Arch Acquisition Corporation, our wholly owned subsidiary formed for the purpose of the transaction, pursuant to which Arch Acquisition Corporation merged with and into ABS and ABS thereby became our wholly owned subsidiary (the “**Merger**”). The Merger closed on June 26, 2013. In contemplation of the Merger, we changed our name from Almah, Inc. to Arch Therapeutics, Inc. Our principal executive offices are located at 235 Walnut St., Suite 6, Framingham, Massachusetts 01702. The telephone number of our principal executive offices is (617) 431-2313. Our website address is <http://www.archtherapeutics.com>. We have not

incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this document.

RISK FACTORS

You should carefully consider all of the information in this prospectus and, in particular, you should evaluate the specific risk factors incorporated by reference herein and included or incorporated by reference in any applicable prospectus supplement.

USE OF PROCEEDS

Unless otherwise indicated in a prospectus supplement, the net proceeds from the sale of the securities will be used for working capital and general corporate purposes, which may include acquisitions, retirement of debt and other business opportunities. While we do not have agreements or commitments for any specific acquisitions or investments at this time, we may be required to use a portion of any such net proceeds to satisfy our indebtedness to Massachusetts Life Sciences Center (“**MLSC**”). Pursuant to the Life Sciences Accelerator Funding Agreement that we entered into with MLSC on September 30, 2013 and amended on September 28, 2016 (as amended, the “**MLSC Loan Agreement**”), we are required to amortize the principal and accrued interest under the MLSC Loan Agreement by making 13 monthly payments of approximately \$106,022 each to MLSC commencing on October 3, 2016. In addition, the remaining principal and accrued interest under the MLSC Loan Agreement will become immediately due and payable on the earlier of (i) the completion of a sale of substantially all of our assets, a change-of-control transaction or one or more financing transactions in which we receive net proceeds of \$5,000,000 at any time after October 3, 2016; and (ii) the occurrence of an event of default by us under the MLSC Loan Agreement.

When particular securities are offered, the prospectus supplement relating to that offering will set forth our intended use of the net proceeds received from the sale of those securities we sell. Pending the application of the net proceeds for these purposes, we expect to invest the proceeds in short-term, interest-bearing instruments or other investment-grade securities.

DESCRIPTION OF CAPITAL STOCK

General

Effective May 24, 2013, we amended our Articles of Incorporation to increase our authorized Common Stock from 75,000,000 shares to 300,000,000 shares. Other than our Common Stock, we have no other class or series of authorized capital stock.

As of October 14, 2016, we had 136,457,075 shares of common stock issued and outstanding.

The additional shares of our authorized stock available for issuance may be issued at times and under circumstances so as to have a dilutive effect on earnings per share and on the equity ownership of the holders of our common stock. The ability of our Board of Directors (the “**Board**”) to issue additional shares of stock could enhance the Board’s ability to negotiate on behalf of the stockholders in a takeover situation but could also be used by the Board to make a change-in-control more difficult, thereby denying stockholders the potential to sell their shares at a premium and entrenching current management. The following description is a summary of the material provisions of our capital stock. You should refer to our articles of incorporation, as amended, and bylaws, both of which are on file with the SEC as exhibits to previous SEC filings, for additional information. The summary below is qualified by provisions of applicable law.

common stock

The holders of our common stock, par value \$0.001 per share, are entitled to one vote per share on all matters submitted to a vote of our stockholders, including the election of directors. Our articles of incorporation do not

provide for cumulative voting in the election of directors, and our amended and restated bylaws provide that directors are elected by a plurality vote of the votes cast and entitled to vote on the election of directors at any meeting for the election of directors at which a quorum is present. Matters other than the election of directors to be voted on by stockholders are generally approved if, at a duly convened stockholder meeting, the number of votes cast in favor of the action exceeds the number of votes cast in opposition to the action, unless a different vote for the action is required by applicable law, our articles of incorporation or our amended and restated bylaws. Applicable Nevada law requires any amendment to our articles of incorporation to be approved by stockholders holding shares entitling them to exercise at least a majority of the voting power of the Company. The holders of our common stock will be entitled to cash dividends as may be declared, if any, by the Board from funds available. Upon liquidation, dissolution or winding up of our Company, the holders of our common stock (the “**common stockholders**”) will be entitled to receive pro rata all assets available for distribution to the holders. All rights of our common stockholders described in this paragraph could be subject to any preferential voting, liquidation or other rights of any series of preferred stock that we may authorize and issue in the future. Our common stock is presently traded on the QB tier of the OTC Marketplace under the trading symbol “**ARTH**”.

Anti-Takeover Provisions of Nevada State Law

Some features of the Nevada Revised Statutes (“**NRS**”), which are further described below, may have the effect of deterring third parties from making takeover bids for control of us or may be used to hinder or delay a takeover bid. This would decrease the chance that our common stockholders would realize a premium over market price for their shares of common stock as a result of a takeover bid.

Acquisition of Controlling Interest

The NRS contain provisions governing acquisition of a controlling interest of a Nevada corporation. These provisions provide generally that any person or entity that acquires a certain percentage of the outstanding voting shares of a Nevada corporation may be denied voting rights with respect to the acquired shares, unless certain criteria are satisfied. Our amended and restated bylaws provide that these provisions will not apply to us or to any existing or future common stockholder or common stockholders.

Combination with Interested Stockholder

The NRS contain provisions governing combinations of a Nevada corporation that has 200 or more stockholders of record with an “interested stockholder.” These provisions only apply to a Nevada corporation that, at the time the potential acquirer became an interested stockholder, has a class or series of voting shares listed on a national securities exchange, or has a class or series of voting shares traded in an “organized market” and satisfies certain specified public float and stockholder levels. As we do not now meet those requirements, we do not believe that these provisions are currently applicable to us. However, to the extent they become applicable to us in the future, they may have the effect of delaying or making it more difficult to affect a change in control of the Company in the future.

A corporation affected by these provisions may not engage in a combination within two years after the interested stockholder acquires his, her or its shares unless the combination or purchase is approved by the board of directors before the interested stockholder acquired such shares. Generally, if approval is not obtained, then after the expiration of the two-year period, the business combination may be consummated with the approval of the board of directors before the person became an interested stockholder or a majority of the voting power held by disinterested stockholders, or if the consideration to be received per share by disinterested stockholders is at least equal to the highest of:

the highest price per share paid by the interested stockholder within the three years immediately preceding the date of the announcement of the combination or within three years immediately before, or in, the transaction in which he, she or it became an interested stockholder, whichever is higher;

the market value per share on the date of announcement of the combination or the date the person became an interested stockholder, whichever is higher; or

- if higher for the holders of preferred stock, the highest liquidation value of the preferred stock, if any.

Generally, these provisions define an interested stockholder as a person who is the beneficial owner, directly or indirectly of 10% or more of the voting power of the outstanding voting shares of a corporation, and define combination to include any merger or consolidation with an interested stockholder, or any sale, lease, exchange, mortgage, pledge, transfer or other disposition, in one transaction or a series of transactions with an interested stockholder of assets of the corporation:

having an aggregate market value equal to 5% or more of the aggregate market value of the assets of the corporation;

having an aggregate market value equal to 5% or more of the aggregate market value of all outstanding shares of the corporation; or

- representing 10% or more of the earning power or net income of the corporation.

Warrants Issued and Outstanding

As of October 14, 2016, we had issued and outstanding:

Series A Warrants to purchase 1,125,000 shares of common stock issuable thereunder at an exercise price of \$0.20 per share;

Series D Warrants to purchase 10,951,663 shares of common stock issuable thereunder at an exercise price of \$0.25 per share;

Series E Warrants to purchase 6,333,323 shares of common stock issuable thereunder at an exercise price of \$0.4380 per share; and

A warrant issued to the Massachusetts Life Sciences Center (“MLSC”) in connection with the our loan agreement with MLSC to purchase up to 145,985 shares of common stock issuable thereunder at an exercise price of \$0.274 per share.

Transfer Agent and Registrar

The transfer agent for our common stock is Empire Stock Transfer. Our transfer agent's address is 1859 Whitney Mesa Drive, Henderson, Nevada 89014.

DESCRIPTION OF WARRANTS

We may issue warrants to purchase our debt or equity securities or securities of third parties or other rights, including rights to receive payment in cash or securities based on the value, rate or price of one or more specified commodities, currencies, securities or indices, or any combination of the foregoing. Warrants may be issued independently or together with any other securities and may be attached to, or separate from, such securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank, trust company or other financial institution, as warrant agent, or we may issue warrants directly to investors. A description of the terms and material provisions of any warrants we may issue will be set forth in the applicable prospectus supplement.

The applicable prospectus supplement will describe the following terms of any warrants in respect of which this prospectus is being delivered:

- the title of such warrants;
- the aggregate number of such warrants;
- the price or prices at which such warrants will be issued;
- the currency or currencies in which the price of such warrants will be payable;
- the securities or other rights, including rights to receive payment in cash or securities based on the value, rate or price of one or more specified commodities, currencies, securities or indices, or any combination of the foregoing, purchasable upon exercise of such warrants;
- the price at which and the currency or currencies in which the securities or other rights purchasable upon exercise of such warrants may be purchased;
- the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;
 - if applicable, the minimum or maximum amount of such warrants which may be exercised at any one time;
 - provision for changes to or adjustments in the exercise price of such warrants, if any;
- if applicable, the designation and terms of the securities with which such warrants are issued and the number of such warrants issued with each such security;
- if applicable, the date on and after which such warrants and the related securities will be separately transferable;
- information with respect to book-entry procedures, if any;
- if applicable, a discussion of any material United States Federal income tax considerations; and
- any other terms of such warrants, including terms, procedures and limitations relating to the exchange and exercise of such warrants.

DESCRIPTION OF DEBT SECURITIES

This prospectus describes certain general terms and provisions of debt securities that we may offer. The debt securities may be issued pursuant to, in the case of senior debt securities, a senior indenture, and in the case of subordinated debt securities, a subordinated indenture, in each case in the forms filed as exhibits to this registration statement, which we refer to as the “**indentures**.” The indentures will be entered into between us and a trustee to be named prior to the issuance of any debt securities, which we refer to as the “**trustee**.” The indentures will not limit the amount of debt securities that can be issued thereunder and will provide that the debt securities may be issued from time to time in one or more series pursuant to the terms of one or more securities resolutions or supplemental indentures creating such series.

We have summarized below the material provisions of the indentures and the debt securities or indicated which material provisions will be described in the related prospectus supplement for any offering of debt securities. These descriptions are only summaries, and you should refer to the relevant indenture for the particular offering of debt securities itself which will describe completely the terms and definitions of the offered debt securities and contain additional information about the debt securities.

All references in this section, “**DESCRIPTION OF DEBT SECURITIES**,” to “**Arch**,” the “**Company**,” “**we**,” “**us**,” “**our**,” “**registrant**” or similar words are solely to Arch Therapeutics, Inc., and not to its subsidiaries.

Terms

When we offer to sell a particular series of debt securities, we will describe the specific terms of the securities in a prospectus supplement. The prospectus supplement will set forth the following terms, as applicable, of the debt securities offered thereby:

- the designation, aggregate principal amount, currency or composite currency and denominations; the price at which such debt securities will be issued and, if an index formula or other method is used, the method for determining amounts of principal or interest;
- the maturity date and other dates, if any, on which principal will be payable;
- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- whether the debt securities rank as senior debt, senior subordinated debt, subordinated debt or any combination thereof, and the terms of any subordination;

- the interest rate (which may be fixed or variable), if any;
- the date or dates from which interest will accrue and on which interest will be payable, and the record dates for the payment of interest;
- the manner of paying principal and interest;
- the place or places where principal and interest will be payable;
- the terms of any mandatory or optional redemption by us or any third party including any sinking fund;
- the terms of any conversion or exchange;
- the terms of any redemption at the option of holders or put by the holders;
- any tax indemnity provisions;
- if the debt securities provide that payments of principal or interest may be made in a currency other than that in which debt securities are denominated, the manner for determining such payments;
- the portion of principal payable upon acceleration of a Discounted Debt Security (as defined below);
- whether and upon what terms debt securities may be defeased;
- any events of default or covenants in addition to or in lieu of those set forth in the indentures;
- provisions for electronic issuance of debt securities or for debt securities in uncertificated form; and
- any additional provisions or other special terms not inconsistent with the provisions of the indentures, including any terms that may be required or advisable under United States or other applicable laws or regulations, or advisable in connection with the marketing of the debt securities.

Debt securities of any series may be issued as registered debt securities or uncertificated debt securities, in such denominations as specified in the terms of the series.

Securities may be issued under the indentures as Discounted Debt Securities to be offered and sold at a substantial discount from the principal amount thereof. Special United States federal income tax and other considerations applicable thereto will be described in the prospectus supplement relating to such Discounted Debt Securities. **“Discounted Debt Security”** means a security where the amount of principal due upon acceleration is less than the stated principal amount.

We are not obligated to issue all debt securities of one series at the same time and, unless otherwise provided in the prospectus supplement, we may reopen a series, without the consent of the holders of the debt securities of that series, for the issuance of additional debt securities of that series. Additional debt securities of a particular series will have the same terms and conditions as outstanding debt securities of such series, except for the date of original issuance and the offering price, and will be consolidated with, and form a single series with, such outstanding debt securities.

Ranking

The senior debt securities will rank equally with all of our other senior and unsubordinated debt. Our secured debt, if any, will be effectively senior to the senior debt securities to the extent of the value of the assets securing such debt. The subordinated debt securities will be subordinate and junior in right of payment to all of our present and future senior indebtedness to the extent and in the manner described in the prospectus supplement and as set forth in the board resolution, officer’s certificate or supplemental indenture relating to such offering.

We have only a stockholder’s claim on the assets of our subsidiaries. This stockholder’s claim is junior to the claims that creditors of our subsidiaries have against our subsidiaries. Holders of our debt securities will be our creditors and not creditors of any of our subsidiaries. As a result, all the existing and future liabilities of our subsidiaries, including any claims of their creditors, will effectively be senior to the debt securities with respect to the assets of our subsidiaries. In addition, to the extent that we issue any secured debt, the debt securities will be effectively subordinated to such secured debt to the extent of the value of the assets securing such secured debt.

The debt securities will be obligations exclusively of Arch Therapeutics, Inc. To the extent that our ability to service our debt, including the debt securities, may be dependent upon the earnings of our subsidiaries, our ability to do so will be dependent on the ability of our subsidiaries to distribute those earnings to us as dividends, loans or other

payments.

Certain Covenants

Any covenants that may apply to a particular series of debt securities will be described in the prospectus supplement relating thereto.

Successor Obligor

The indentures provide that, unless otherwise specified in the securities resolution or supplemental indenture establishing a series of debt securities, we shall not consolidate with or merge into, or transfer all or substantially all of our assets to, any person in any transaction in which we are not the survivor, unless:

- the person is organized under the laws of the United States or a jurisdiction within the United States;
- the person assumes by supplemental indenture all of our obligations under the relevant indenture, the debt securities and any coupons;
- immediately after the transaction no Default (as defined below) exists; and
- we deliver to the trustee an officers' certificate and opinion of counsel stating that the transaction complies with the foregoing requirements.

In such event, the successor will be substituted for us, and thereafter all of our obligations under the relevant indenture, the debt securities and any coupons will terminate.

Exchange of Debt Securities

Registered debt securities may be exchanged for an equal aggregate principal amount of registered debt securities of the same series and date of maturity in such authorized denominations as may be requested upon surrender of the registered debt securities at an agency of the Company maintained for such purpose and upon fulfillment of all other requirements of such agent.

Default and Remedies

Unless the securities resolution or supplemental indenture establishing the series otherwise provides (in which event the prospectus supplement will so state), an “**Event of Default**” with respect to a series of debt securities will occur if:

- (1) we default in any payment of interest on any debt securities of such series when the same becomes due and payable and the default continues for a period of 30 days;
- (2) we default in the payment of the principal and premium, if any, of any debt securities of such series when the same becomes due and payable at maturity or upon redemption, acceleration or otherwise and such default shall continue for five or more days;
- (3) we default in the performance of any of our other agreements applicable to the series and the default continues for 30 days after the notice specified below;
- (4) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law (as defined below) that:
 - (A) is for relief against us in an involuntary case,
 - (B) appoints a Custodian (as defined below) for us or for all or substantially all of our property, or
 - (C) orders the liquidation of us, and the order or decree remains unstayed and in effect for 90 days;
- (5) we pursuant to or within the meaning of any Bankruptcy Law:
 - (A) commence a voluntary case,
 - (B) consent to the entry of an order for relief against us in an involuntary case,
 - (C) consent to the appointment of a Custodian for us or for all or substantially all of our property, or
 - (D) make a general assignment for the benefit of our creditors; or
- (6) there occurs any other Event of Default provided for in such series.

The term “**Bankruptcy Law**” means Title 11 of the United States Code or any similar Federal or State law for the relief of debtors. The term “**Custodian**” means any receiver, trustee, assignee, liquidator or a similar official under any Bankruptcy Law.

“Default” means any event which is, or after notice or passage of time would be, an Event of Default. A Default under subparagraph (3) above is not an Event of Default until the trustee or the holders of at least 25% in principal amount of the series notify us of the Default and we do not cure the Default within the time specified after receipt of the notice.

The trustee may require indemnity satisfactory to it before it enforces the indentures or the debt securities of the series. Subject to certain limitations, holders of a majority in principal amount of the debt securities of the series may direct the trustee in its exercise of any trust or power with respect to such series. Except in the case of Default in payment on a series, the trustee may withhold from securityholders of such series notice of any continuing Default if the trustee determines that withholding notice is in the interest of such Securityholders. We are required to furnish the trustee annually a brief certificate as to our compliance with all conditions and covenants under the indentures.

The indentures do not have cross-default provisions. Thus, a default by us on any other debt, including any other series of debt securities, would not constitute an Event of Default.

Amendments and Waivers

The indentures and the debt securities or any coupons of the series may be amended, and any Default may be waived as follows:

Unless the securities resolution or supplemental indenture otherwise provides (in which event the applicable prospectus supplement will so state), the debt securities and the indentures may be amended with the consent of the holders of a majority in principal amount of the debt securities of all series affected voting as one class. Unless the securities resolution or supplemental indenture otherwise provides (in which event the applicable prospectus supplement will so state), a Default other than a Default in payment on a particular series may be waived with the consent of the holders of a majority in principal amount of the debt securities of the series. However, without the consent of each securityholder affected, no amendment or waiver may:

- change the fixed maturity of or the time for payment of interest on any debt security;
- reduce the principal, premium or interest payable with respect to any debt security;
- change the place of payment of a debt security or the currency in which the principal or interest on a debt security is payable;
- change the provisions for calculating any redemption or repurchase price with respect to any debt security;
 - reduce the amount of debt securities whose holders must consent to an amendment or waiver;
 - make any change that materially adversely affects the right to convert any debt security;
 - waive any Default in payment of principal of or interest on a debt security; or
 - adversely affect any holder's rights with respect to redemption or repurchase of a debt security.

Without the consent of any securityholder, the indentures or the debt securities may be amended to:

• provide for assumption of our obligations to securityholders in the event of a merger or consolidation requiring such assumption;

- to cure any ambiguity, omission, defect or inconsistency;

• to conform the terms of the debt securities to the description thereof in the prospectus and prospectus supplement offering such debt securities;

- to create a series and establish its terms;

• to provide for assumption of our obligations to securityholders in the event of a merger or consolidation requiring such assumption;

- to make any change that does not adversely affect the rights of any securityholder;
 - to add to our covenants; or
- to make any other change to the indentures so long as no debt securities are outstanding.

Conversion Rights

Any securities resolution or supplemental indenture establishing a series of debt securities may provide that the debt securities of such series will be convertible at the option of the holders thereof into or for our common stock or other equity or debt instruments. The securities resolution or supplemental indenture may establish, among other things, (1) the number or amount of shares of common stock or other equity or debt instruments for which \$1,000 aggregate principal amount of the debt securities of the series is convertible, as may be adjusted pursuant to the terms of the relevant indenture and the securities resolution; and (2) provisions for adjustments to the conversion rate and limitations upon exercise of the conversion right. The indentures provide that we will not be required to make an adjustment in the conversion rate unless the adjustment would require a cumulative change of at least 1% in the conversion rate. However, we will carry forward any adjustments that are less than 1% of the conversion rate and take them into account in any subsequent adjustment of the conversion rate.

Legal Defeasance and Covenant Defeasance

Debt securities of a series may be defeased in accordance with their terms and, unless the securities resolution or supplemental indenture establishing the terms of the series otherwise provides, as set forth below. We at any time may terminate as to a series all of our obligations (except for certain obligations, including obligations with respect to the defeasance trust and obligations to register the transfer or exchange of a debt security, to replace destroyed, lost or stolen debt securities and coupons and to maintain paying agencies in respect of the debt securities) with respect to the debt securities of the series and any related coupons and the relevant indenture, which we refer to as legal defeasance. We at any time may terminate as to a series our obligations with respect to any restrictive covenants which may be applicable to a particular series, which we refer to as covenant defeasance.

We may exercise our legal defeasance option notwithstanding our prior exercise of our covenant defeasance option. If we exercise our legal defeasance option, a series may not be accelerated because of an Event of Default. If we exercise our covenant defeasance option, a series may not be accelerated by reference to any covenant which may be applicable to a series.

To exercise either defeasance option as to a series, we must (1) irrevocably deposit in trust with the trustee (or another trustee) money or U.S. Government Obligations (as defined below), deliver a certificate from a nationally recognized firm of independent accountants expressing their opinion that the payments of principal and interest when due on the deposited U.S. Government Obligations, without reinvestment, plus any deposited money without investment will provide cash at such times and in such amounts as will be sufficient to pay the principal and interest when due on all debt securities of such series to maturity or redemption, as the case may be; and (2) comply with certain other conditions. In particular, we must obtain an opinion of tax counsel that the defeasance will not result in recognition of any gain or loss to holders for federal income tax purposes.

“U.S. Government Obligations” means direct obligations of the United States or any agency or instrumentality of the United States, the payment of which is unconditionally guaranteed by the United States, which, in either case, have the full faith and credit of the United States pledged for payment and which are not callable at the issuer’s option, or certificates representing an ownership interest in such obligations.

Regarding the Trustee

Unless otherwise indicated in a prospectus supplement, the trustee will also act as depository of funds, transfer agent, paying agent and conversion agent, as applicable, with respect to the debt securities. We may remove the trustee as the trustee under a given indenture with or without cause if we so notify the trustee three months in advance and if no Default occurs during the three-month period. The indenture trustee may also provide additional unrelated services to us as a depository of funds, registrar, trustee and similar services.

Governing Law

The indentures and the debt securities will be governed by New York law, except to the extent that the Trust Indenture Act of 1939 is applicable.

DESCRIPTION OF SUBSCRIPTION RIGHTS

We may issue subscription rights to purchase our common stock or debt securities. These subscription rights may be offered independently or together with any other security offered hereby and may or may not be transferable by the stockholder receiving the subscription rights in such offering. In connection with any offering of subscription rights, we may enter into a standby arrangement with one or more underwriters or other purchasers pursuant to which the underwriters or other purchasers may be required to purchase any securities remaining unsubscribed for after such offering.

The prospectus supplement relating to any subscription rights we offer, if any, will, to the extent applicable, include specific terms relating to the offering, including some or all of the following:

- the price, if any, for the subscription rights;
- the exercise price payable for our common stock or debt securities upon the exercise of the subscription rights;
- the number of subscription rights to be issued to each stockholder;
- the number and terms of our common stock or debt securities which may be purchased per each subscription right;
- the extent to which the subscription rights are transferable;
- any other terms of the subscription rights, including the terms, procedures and limitations relating to the exchange and exercise of the subscription rights;
- the date on which the right to exercise the subscription rights shall commence, and the date on which the subscription rights shall expire;
- the extent to which the subscription rights may include an over-subscription privilege with respect to unsubscribed securities or an over-allotment privilege to the extent the securities are fully subscribed; and
- if applicable, the material terms of any standby underwriting or purchase arrangement which may be entered into by Arch in connection with the offering of subscription rights.

DESCRIPTION OF UNITS

We may issue units comprised of one or more of the other classes of securities described in this prospectus in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The units may be issued under unit agreements to be entered into between us and a unit agent, as detailed in the prospectus supplement relating to the units being offered. The prospectus supplement will describe:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units;
- the terms of the unit agreement governing the units;
- United States federal income tax considerations relevant to the units; and
- whether the units will be issued in fully registered global form.

FORMS OF SECURITIES

Each debt security and, to the extent applicable, warrant, subscription right and unit, will be represented either by a certificate issued in definitive form to a particular investor or by one or more global securities representing the entire issuance of securities. Certificated securities in definitive form and global securities will be issued in registered form. Definitive securities name you or your nominee as the owner of the security, and in order to transfer or exchange these securities or to receive payments other than interest or other interim payments, you or your nominee must physically deliver the securities to the trustee, registrar, paying agent or other agent, as applicable. Global securities name a depository or its nominee as the owner of the debt securities or warrants represented by these global securities. The depository maintains a computerized system that will reflect each investor's beneficial ownership of the securities through an account maintained by the investor with its broker/dealer, bank, trust company or other representative, as we explain more fully below.

Global Securities

Registered Global Securities. We may issue the registered debt securities and, to the extent applicable, warrants, subscription rights and units in the form of one or more fully registered global securities that will be deposited with a depository or its nominee identified in the applicable prospectus supplement and registered in the name of that depository or nominee. In those cases, one or more registered global securities will be issued in a denomination or aggregate denominations equal to the portion of the aggregate principal or face amount of the securities to be represented by registered global securities. Unless and until it is exchanged in whole for securities in definitive registered form, a registered global security may not be transferred except as a whole by and among the depository for the registered global security, the nominees of the depository or any successors of the depository or those nominees.

If not described below, any specific terms of the depository arrangement with respect to any securities to be represented by a registered global security will be described in the prospectus supplement relating to those securities. We anticipate that the following provisions will apply to all depository arrangements.

Ownership of beneficial interests in a registered global security will be limited to persons, called participants, that have accounts with the depository or persons that may hold interests through participants. Upon the issuance of a registered global security, the depository will credit, on its book-entry registration and transfer system, the participants' accounts with the respective principal or face amounts of the securities beneficially owned by the participants. Any dealers, underwriters or agents participating in the distribution of the securities will designate the accounts to be credited. Ownership of beneficial interests in a registered global security will be shown on, and the transfer of ownership interests will be effected only through, records maintained by the depository, with respect to interests of

participants, and on the records of participants, with respect to interests of persons holding through participants. The laws of some states may require that some purchasers of securities take physical delivery of these securities in definitive form. These laws may impair your ability to own, transfer or pledge beneficial interests in registered global securities.

So long as the depositary, or its nominee, is the registered owner of a registered global security, that depositary or its nominee, as the case may be, will be considered the sole owner or holder of the securities represented by the registered global security for all purposes under the applicable indenture or warrant agreement. Except as described below, owners of beneficial interests in a registered global security will not be entitled to have the securities represented by the registered global security registered in their names, will not receive or be entitled to receive physical delivery of the securities in definitive form and will not be considered the owners or holders of the securities under the applicable indenture or warrant agreement. Accordingly, each person owning a beneficial interest in a registered global security must rely on the procedures of the depositary for that registered global security and, if that person is not a participant, on the procedures of the participant through which the person owns its interest, to exercise any rights of a holder under the applicable indenture or warrant agreement. We understand that under existing industry practices, if we request any action of holders or if an owner of a beneficial interest in a registered global security desires to give or take any action that a holder is entitled to give or take under the applicable indenture or warrant agreement, the depositary for the registered global security would authorize the participants holding the relevant beneficial interests to give or take that action, and the participants would authorize beneficial owners owning through them to give or take that action or would otherwise act upon the instructions of beneficial owners holding through them.

Principal, premium, if any, and interest payments on debt securities and any payments to holders with respect to warrants represented by a registered global security registered in the name of a depositary or its nominee will be made to the depositary or its nominee, as the case may be, as the registered owner of the registered global security. None of Arch, the trustees, the warrant agents or any other agent of Arch, agent of the trustees or agent of the warrant agents will have any responsibility or liability for any aspect of the records relating to payments made on account of beneficial ownership interests in the registered global security or for maintaining, supervising or reviewing any records relating to those beneficial ownership interests.

We expect that the depositary for any of the securities represented by a registered global security, upon receipt of any payment of principal, premium, interest or other distribution of underlying securities or other property to holders on that registered global security, will immediately credit participants' accounts in amounts proportionate to their respective beneficial interests in that registered global security as shown on the records of the depositary. We also expect that payments by participants to owners of beneficial interests in a registered global security held through participants will be governed by standing customer instructions and customary practices, as is now the case with the securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of those participants.

If the depositary for any of these securities represented by a registered global security is at any time unwilling or unable to continue as depositary or ceases to be a clearing agency registered under the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), and a successor depositary registered as a clearing agency under the Exchange Act is not appointed by us within 90 days, we will issue securities in definitive form in exchange for the registered global security that had been held by the depositary. Any securities issued in definitive form in exchange for a registered global security will be registered in the name or names that the depositary gives to the relevant trustee or warrant agent or other relevant agent of ours or theirs. It is expected that the depositary's instructions will be based upon directions received by the depositary from participants with respect to ownership of beneficial interests in the registered global security that had been held by the depositary.

PLAN OF DISTRIBUTION

We may sell the securities being offered hereby in the following manner or any manner specified in a prospectus supplement:

- directly to purchasers;
- through agents;
- through underwriters; and
- through dealers.

The prospectus supplement will set forth the terms of the offering of such securities, including:

- the name or names of any underwriters, dealers or agents and the amounts of securities underwritten or purchased by each of them;
- the initial public offering price of the securities and the proceeds to us and any discounts, commissions or concessions allowed or reallocated or paid to dealers; and
- any securities exchanges on which the securities may be listed.

We may directly solicit offers to purchase securities, or agents may be designated to solicit such offers. We will, in the prospectus supplement relating to such offering, name any agent that could be viewed as an underwriter under the Securities Act, and describe any commissions that we must pay. Any such agent will be acting on a best efforts basis for the period of its appointment or, if indicated in the applicable prospectus supplement, on a firm commitment basis. Agents, dealers and underwriters may be customers of, engage in transactions with, or perform services for us in the ordinary course of business.

If any underwriters or agents are utilized in the sale of the securities in respect of which this prospectus is delivered, we will enter into an underwriting agreement or other agreement with them at the time of sale to them, and we will set forth in the prospectus supplement relating to such offering the names of the underwriters or agents and the terms of the related agreement with them.

If a dealer is utilized in the sale of the securities in respect of which the prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale.

Remarketing firms, agents, underwriters and dealers may be entitled under agreements which they may enter into with us to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, and may be customers of, engage in transactions with or perform services for us in the ordinary course of business.

In order to facilitate the offering of the securities, any underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the securities or any other securities the prices of which may be used to determine payments on such securities. Specifically, any underwriters may overallocate in connection with the offering, creating a short position for their own accounts. In addition, to cover overallocations or to stabilize the price of the securities or of any such other securities, the underwriters may bid for, and purchase, the securities or any such other securities in the open market. Any of these activities may stabilize or maintain the market price of the securities above independent market levels. Any such underwriters are not required to engage in these activities and may end any of these activities at any time.

Any underwriter, agent or dealer utilized in the initial offering of any securities issued hereunder will not confirm sales to accounts over which it exercises discretionary authority without the prior specific written approval of its customer.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, the validity of the securities offered hereby will be passed upon for us by McDonald Carano Wilson LLP, Reno, Nevada. If the validity of the securities offered hereby in connection with offerings made pursuant to this prospectus are passed upon by counsel for the underwriters, dealers or agents, if any, such counsel will be named in the prospectus supplement relating to such offering.

EXPERTS

Moody, Famiglietti & Andronico, LLP, an independent registered public accounting firm, has audited our consolidated financial statements for the years ended September 30, 2015 and 2014, as stated in its report appearing herein, and such audited consolidated financial statements have been so included in reliance upon the report of such firm given upon its authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read or obtain a copy of these reports at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549, on official business days during the hours of 10:00 am to 3:00 pm. You may obtain information on the operation of the public reference room and its copy charges by calling the SEC at 1-800-SEC-0330. The SEC maintains a website, at <http://www.sec.gov>, that contains registration statements, reports, proxy information statements and other information regarding registrants that file electronically with the SEC, including us. Our website address is <http://www.archtherapeutics.com>. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this document.

The SEC allows us to “incorporate by reference” information that we file with it into this prospectus, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede information contained in this prospectus and any accompanying prospectus supplement.

We incorporate by reference the documents listed below that we have previously filed with the SEC, each of which has Exchange Act File No. 000-54986 unless otherwise noted:

- our Annual Report on Form 10-K for the fiscal year ended September 30, 2015, filed with the SEC on December 11, 2015;
- our Quarterly Reports on Form 10-Q for the quarters ended December 31, 2015, March 30, 2016, and June 30, 2016, which were filed with the SEC on February 12, 2016, April 28, 2016 and July 28, 2016, respectively;
- our Current Reports on Form 8-K filed with the SEC on December 01, 2015, December 03, 2015, December 16, 2015, March 07, 2016, March 09, 2016, March 14, 2016, March 22, 2016, April 05, 2016, April 11, 2016, April 25, 2016, May 06, 2016, May 10, 2016, May 16, 2016, June 02, 2016, June 06, 2016, August 15, 2016 and September 29, 2016; and
- the description of our common stock as set forth under the caption “Description of Securities” in our Registration Statement on Form S-1/A (File No. 333-178883), as amended and filed with the SEC on February 24, 2012,

including any amendments thereto or reports filed for the purposes of updating this description (including our Current Report on Form 8-K filed with the SEC on June 26, 2013 (File No. 333-178883)).

All reports and other documents that we file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus but before the termination of the offering of the securities hereunder will also be considered to be incorporated by reference into this prospectus from the date of the filing of these reports and documents, and will supersede the information herein; *provided, however*, that all reports, exhibits and other information that we “furnish” to the SEC will not be considered incorporated by reference into this prospectus. Any statement contained in a document incorporated by reference in this prospectus or any prospectus supplement shall be deemed to be modified or superseded to the extent that a statement contained herein, therein or in any other subsequently filed document that also is incorporated by reference herein or therein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus or any prospectus supplement.

We will provide you without charge, upon your oral or written request, with a copy of any or all reports, proxy statements and other documents we file with the SEC, as well as any or all of the documents incorporated by reference in this prospectus or the registration statement (other than exhibits to such documents unless such exhibits are specifically incorporated by reference into such documents). Requests for such copies should be directed to:

Arch Therapeutics, Inc.

235 Walnut St., Suite 6

Framingham, MA 01702

(617) 431-2313

Up to 10,166,664 Shares of Common Stock

Warrants to Purchase up to 5,591,664 Shares of Common Stock

PROSPECTUS SUPPLEMENT

The date of this prospectus supplement is FEBRUARY 21, 2017