

**PROSPECTUS SUPPLEMENT NO. 1 DATED December 1, 2015
TO
PROSPECTUS DATED OCTOBER 27, 2015
(AS SUPPLEMENTED)**

ARCH THERAPEUTICS, INC.

PROSPECTUS

Up to 28,781,508 Shares of Common Stock

This Prospectus Supplement No. 1 supplements the prospectus of Arch Therapeutics, Inc. (“the **“Company”**”, “we”, “us”, or “our”) dated October 27, 2015 (as supplemented to date, the **“Prospectus”**) with the following attached document which we filed with the Securities and Exchange Commission on December 1, 2015:

- A. Our Current Report on Form 8-K filed with the Securities and Exchange Commission on December 1, 2015

This Prospectus Supplement No. 1 should be read in conjunction with the Prospectus, which is required to be delivered with this Prospectus Supplement. This Prospectus Supplement updates, amends and supplements the information included in the Prospectus. If there is any inconsistency between the information in the Prospectus and this Prospectus Supplement, you should rely on the information in this Prospectus Supplement.

This Prospectus Supplement is not complete without, and may not be delivered or utilized except in connection with, the Prospectus, including any amendments or supplements to it.

Investing in our common stock involves a high degree of risk. Before making any investment in our common stock, you should carefully consider the risk factors for our common stock, which are described in the Prospectus, as amended or supplemented.

You should rely only on the information contained in the Prospectus, as supplemented or amended by this Prospectus Supplement No. 1 and any other Prospectus Supplement or amendment thereto. We have not authorized anyone to provide you with different information.

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 Supplement No. 1 is December 1, 2015

INDEX TO FILINGS

The Company’s Current Report on Form 8-K filed with the Securities and Exchange Commission on December 1, 2015

Annex

A

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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 OR 15(d) of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **December 1, 2015**

ARCH THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Nevada
(State or other jurisdiction
of incorporation)

000-54986
(Commission
File Number)

46-0524102
(I.R.S. Employer
Identification No.)

235 Walnut Street, Suite 6
Framingham, Massachusetts
(Address of principal executive offices)

01702
(Zip Code)

Registrant's telephone number, including area code: **(617) 431-2313**

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 8.01 Other Events.

On December 1, 2015, Arch Therapeutics, Inc. (the “**Company**”) issued a press release announcing the results of a study pertaining to the wound healing characteristics of its lead product candidate, the AC5 Surgical Hemostatic Device™ (“**AC5**”), and the estimated timing for the commencement of its first clinical trial for AC5. The text of the press release is attached hereto as Exhibit 99.1 and is incorporated by reference herein.

Item 9.01 Financial Statements and Exhibit

(d) Exhibits

Exhibit	Description
99.1	Press Release issued by Arch Therapeutics, Inc. on December 1, 2015

SIGNATURES

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

ARCH THERAPEUTICS, INC.

Dated: December 1, 2015

By: /s/ Terrence W. Norchi, M.D.

Name: Terrence W. Norchi, M.D.

Title: President, Chief Executive Officer

Exhibit List

Exhibit	Description
99.1	Press Release issued by Arch Therapeutics, Inc. on December 1, 2015

Arch Therapeutics Reports Significant Wound Healing Results in Pre-Clinical Safety Study with AC5 Surgical Hemostatic Device™

Company Expects to Initiate First Clinical Trial of AC5™ by End of 2015

FRAMINGHAM, MA – December 1, 2015 -- Arch Therapeutics, Inc. (OTCQB: ARTH) (“Arch” or the “Company”), reports that use of its AC5 Surgical Hemostatic Device™ resulted in normal wound healing in a skin excision safety study in large pigs. The majority of AC5 treated wounds (n=18) showed full healing and minimal inflammation, with results comparable to those in control animals. Following 14 days of treatment with AC5™, the tissue response was stable and consistent with the advanced stages of biological healing. There was no evidence of abnormal wound healing. Testing of blood samples and other tissues from AC5™-treated animals similarly showed normal tissue and chemistry profiles.

Terrence W. Norchi, MD, president and CEO of Arch Therapeutics, said, “We are encouraged by these results, which show that once bleeding stops after use of AC5, wounds heal normally and with minimal inflammation. We continue to establish safety and biocompatibility with our AC5 device, while also focusing on the scale-up of AC5 product manufacturing and working with our colleagues in Europe to commence our first human trial.”

This study and associated testing were performed under Good Laboratory Practice (GLP) conditions using the same lot of AC5 prepared under Good Manufacturing Practices (GMP) for Arch’s planned upcoming clinical study in humans. Visual healing rate was normal for all wounds and wound-healing rate was normal for all time points. All observed organs appeared normal and all blood analysis parameters showed a normal reaction to wound creation and duration of wound healing.

We have submitted an application to a European regulatory authority to commence our first clinical trial of AC5, and we have received preliminary comments from such regulatory authority on our application. We have responded to those comments, and we expect to receive approval to proceed with our first clinical trial of AC5 during this fiscal quarter. Accordingly, the company is maintaining its previously announced estimated timeframe to commence the first clinical trial of AC5™ in humans by the end of 2015.

About Arch Therapeutics, Inc.

Arch Therapeutics, Inc. is a medical device company developing a novel approach to stop bleeding (hemostasis) and control leaking (sealant) during surgery and trauma care. Arch is developing products based on an innovative self-assembling peptide technology platform to make surgery and interventional care faster and safer for patients. Arch’s flagship development stage product candidate, known as the AC5 Surgical Hemostatic Device™, is being designed to achieve hemostasis in minimally invasive and open surgical procedures.

Notice Regarding Forward-Looking Statements

This news release contains “forward-looking statements” as that term is defined in Section 27(a) of the Securities Act of 1933, as amended, and Section 21(e) of the Securities Exchange Act of 1934, as amended. Statements in this press release that are not purely historical are forward-looking statements and include any statements regarding beliefs, plans, expectations or intentions regarding the future. Such forward-looking statements include, among other things, references to novel technologies and methods, our business and product development plans and projections, or market information. Actual results could differ from those projected in any forward-looking statements due to numerous factors. Such factors include, among others, the inherent uncertainties associated with developing new products or technologies and operating as a development stage company, our ability to retain important members of our management team and attract other qualified personnel, our ability to raise the additional funding we will need to continue to pursue our business and product development plans, our ability to obtain required regulatory approvals, our ability to develop and commercialize products based on our technology platform, and market conditions. These forward-looking statements are made as of the date of this news release, and we assume no obligation to update the forward-looking statements, or to update the reasons why actual results could differ from those projected in the forward-looking statements. Although we believe that any beliefs, plans, expectations and intentions contained in this press release are reasonable, there can be no assurance that any such beliefs, plans, expectations or intentions will prove to be accurate. Investors should consult all of the information set forth herein and should also refer to the risk factors disclosure outlined in the reports and other documents we file with the SEC, available at www.sec.gov.

On Behalf of the Board,
Terrence W. Norchi, MD
Arch Therapeutics, Inc.

Contact:

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