

**PROSPECTUS SUPPLEMENT NO. 15 DATED DECEMBER 16, 2015
TO
PROSPECTUS DATED MAY 22, 2015
(AS SUPPLEMENTED)**

ARCH THERAPEUTICS, INC.

PROSPECTUS

Up to 31,279,926 Shares of Common Stock

This Prospectus Supplement No. 15 supplements the prospectus of Arch Therapeutics, Inc. (“the **Company**”, “**we**”, “**us**”, or “**our**”) dated May 22, 2015 (as supplemented to date, the “**Prospectus**”) with the following attached document which we filed with the Securities and Exchange Commission on December 16, 2015:

A. Our Current Report on Form 8-K filed with the Securities and Exchange Commission on December 16, 2015

This Prospectus Supplement No. 15 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. 15 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. 15 is December 16, 2015

INDEX TO FILINGS

The Company’s Current Report on Form 8-K filed with the Securities and Exchange Commission on December 16, 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 16, 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))
-

Item 8.01 Other Events.

On December 16, 2015, Arch Therapeutics, Inc. (the “**Company**”) issued a press release announcing that the Company has received clearance to initiate its human clinical trial of its lead product candidate, the AC5 Surgical Hemostatic Device™. 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 16, 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 16, 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 16, 2015

Arch Therapeutics Receives Clearance to Initiate Clinical Trial in Europe

Achieves Milestone in CE Mark Evaluation Process for the AC5 Surgical Hemostatic Device™

FRAMINGHAM, MA--(Marketwired – December 16, 2015) - Arch Therapeutics, Inc. (OTCQB: ARTH) ("Arch" or the "Company"), a life sciences company and developer of the AC5 Surgical Hemostatic Device™ ("AC5™"), a novel product aimed at controlling bleeding and fluid loss in order to provide faster and safer surgical and interventional care, has received clearance to initiate a human clinical trial from a regulatory authority in Western Europe.

The randomized controlled single-blind investigation is designed to assess safety and performance of AC5™ in bleeding wounds created during the course of a dermatological procedure in fewer than 50 patients. The endpoints include product related adverse effects, with a planned patient follow-up assessment 30 days following the procedure, and time to hemostasis. A portion of the patients will be taking a therapeutics dose of an antithrombotic medication (commonly referred to as a "blood thinner") during the study period.

Dr. Terence Norchi, President and CEO of Arch, said, "This is an important milestone for the Company as we continue to bring AC5 and our technology platform another step closer to market. We expect to apply for a CE Mark if the data from our study is supportive. We remain committed to completing subsequent clinical trials and expanding the indications for product use."

Arch assembled a comprehensive preclinical package for submission with the application to a European regulatory authority to commence the first clinical trial of AC5 that assesses safety and efficacy. The clearance is a requirement for trial commencement. Administrative obligations, including product shipment and site initiation, are currently being fulfilled and are expected to last through the impending holiday period. The Company expects the initial patient to be treated early in the first quarter 2016. Data are projected to be available within two quarters of the start of the trial.

"We were very encouraged by the preclinical data observed to date, and we believe that AC5 will have similar results in humans," added Dr. Norchi.

About Arch Therapeutics, Inc.

Arch Therapeutics, Inc. is a biotechnology 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 and is intended to be regulated as a medical device. Find out more at www.archtherapeutics.com.

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:

ARTH Investor Relations
Toll Free: +1-855-340-ARTH (2784) (US and Canada)
Email: investors@archtherapeutics.com
Website: www.archtherapeutics.com

Or

Richard Davis
Chief Financial Officer
Arch Therapeutics, Inc.
Phone: 617-431-2308 Email: rdavis@archtherapeutics.com
Website: www.archtherapeutics.com
Source: Arch Therapeutics, Inc.
