

**PROSPECTUS SUPPLEMENT NO. 5 DATED NOVEMBER 6, 2014
TO
PROSPECTUS DATED JULY 2, 2014
(AS SUPPLEMENTED)**

ARCH THERAPEUTICS, INC.

PROSPECTUS

Up to 45,600,000 Shares of Common Stock

This Prospectus Supplement No. 5 supplements the prospectus of Arch Therapeutics, Inc. (“the “Company”, “we”, “us”, or “our”) dated July 2, 2014 (as supplemented to date, the “Prospectus”) with the following attached document which we filed with the Securities and Exchange Commission on November 6, 2014:

- A. Our Current Report on Form 8-K filed with the Securities and Exchange Commission on November 6, 2014

This Prospectus Supplement No. 5 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. 5 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. 5 is November 6, 2014

INDEX TO FILINGS

The Company’s Current Report on Form 8-K filed with the Securities and Exchange Commission on November 6, 2014

Annex

A

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): **November 6, 2014**

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.)

20 William Street, Suite 270
Wellesley, Massachusetts
(Address of principal executive offices)

02481
(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 November 6, 2014, Arch Therapeutics, Inc. (the “Company”) issued a press release announcing the results of a preclinical study of its AC5 Surgical Hemostatic Device™ in patients treated with antiplatelet medications. 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

<u>Exhibit</u>	<u>Description</u>
99.1	Press Release issued by Arch Therapeutics, Inc. on November 6, 2014

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: November 6, 2014

By: /s/ Terrence W. Norchi, M.D.
Name: Terrence W. Norchi, M.D.
Title: President, Chief Executive Officer

EXHIBIT INDEX

Exhibit	Description
99.1	Press Release issued by Arch Therapeutics, Inc. on November 6, 2014

**Arch Therapeutics Reports Positive Preclinical Data from Study of AC5
Surgical Hemostat Device™ in Animals Treated with the Antiplatelet
Medications Plavix® (Clopidogrel) and Aspirin**

AC5™ Quickly Stopped Bleeding in Animals Prescribed Antiplatelet Medications

WELLESLEY, MA – November 6, 2014 -- Arch Therapeutics, Inc. (OTCQB: ARTH) ("Arch" or the "Company"), developer of the AC5 Surgical Hemostat Device™, announced that an independent third-party research group has obtained positive data from a preclinical study assessing the use of AC5™ in animals that had been treated with therapeutic doses of the antiplatelet medications Plavix® (clopidogrel) and aspirin alone and in combination. The results of the study are consistent with recent data obtained from two previous preclinical studies, in which AC5 quickly stopped bleeding from surgical wounds created in rats following treatment with clinically relevant doses of the anticoagulant medication heparin. Antiplatelet and anticoagulant medications are commonly referred to as "blood thinners."

In the present study, performance of AC5 was measured as time to hemostasis (TTH), or cessation of bleeding from surgical wounds created in the livers of rats. The average TTH of groups of rats that had been pre-treated with clinically relevant doses of the commonly prescribed antiplatelet drugs Plavix® and aspirin was compared to the TTH of rats that were not pre-treated. The anticoagulation effect of doses of Plavix® and aspirin was confirmed by measurements of platelet function. Importantly, after AC5 was applied to the bleeding liver wound, the TTH among the groups was comparable, regardless of whether they were pre-treated with the antiplatelet drugs.

In comparison, animals not pre-treated with antiplatelet medications and in which a saline control was used to stop bleeding took more than nine times as long to achieve hemostasis. Furthermore, animals that were administered the antiplatelet medications and in which a saline control was used to stop bleeding in lieu of AC5 took more than thirteen times as long to achieve hemostasis versus those treated with AC5, highlighting that antiplatelet medications do increase the baseline time to hemostasis.

According to Dr. Paresh Shah, Director General Surgery and Vice Chair of Surgery and NYU Langone Medical Center, "There are an increasing number of patients on long-term therapy with antiplatelet agents and other anticoagulants. We are often required to perform procedures and operations on patients with active antiplatelet and anticoagulation therapy. Hemostasis for bleeding control in these patients is extraordinarily challenging. None of the hemostatic agents available today have demonstrated enhanced efficacy in the setting of antiplatelet therapy. The results described in this study are extremely promising because we surgeons need improved hemostatic control in the setting of antiplatelet therapy, which many of our patients are required to stay on for its cardioprotective effects."

The study group intends to submit the data for publication. The results of the study support that AC5 can achieve rapid hemostasis in living animals treated with these commonly used and prescribed antiplatelet medications. The research was led by Rudolf Urbanics, MD, PhD, and Domokos Csukas, DVM at Semmelweis University Faculty of Medicine in Budapest, Hungary within the Department of Surgical Research and Techniques and it was sponsored by Arch. Also part of the research team was Dr. Ellis-Behnke, Director of the Nanomedicine Translational Think Tank in the Department of Ophthalmology at the Medical Faculty Mannheim of the University of Heidelberg in Germany. Dr. Ellis-Behnke is also affiliated with three U.S. academic institutions, and he is an advisor to and co-founder of Arch.

Terrence W. Norchi, MD, President and CEO of Arch Therapeutics, said, “Both Plavix® and aspirin are widely prescribed for ongoing use after a heart attack or stroke. Millions of people take aspirin on their own, many of whom do not realize that it increases their underlying tendency to bleed. This additional research highlights an exciting feature of AC5 that should differentiate it from many existing hemostatic products on the market. If AC5 is approved for commercialization, this key finding highlights a potential solution for the millions of people on these medications who might be at risk for excessive bleeding during surgery and after trauma.”

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 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.

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