Arch Therapeutics, Inc.
Form 424B3
September 08, 2014

Filed Pursuant to Rule 424(b)(3)

Registration No. 333-194745

PROSPECTUS SUPPLEMENT NO. 4 DATED SEPTEMBER 8, 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. 4 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 September 8, 2014:

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

This Prospectus Supplement No. 4 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. 4 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. 4 is September 8, 2014

INDEX TO FILINGS

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): **September 8, 2014**

ARCH THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Nevada	**000-54986**	**46-0524102**
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

20 William Street, Suite 270
Wellesley, Massachusetts **02481**
(Address of principal executive offices) (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 September 8, 2014, Arch Therapeutics, Inc. (the "**Company**") issued a press release announcing the results of a preclinical study of its AC5 Surgical Hemostatic Device™ conducted by an independent third-party research group. 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 September 8, 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: September 8, 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 September 8, 2014

Exhibit 99.1

Arch Therapeutics Announces Positive Preclinical Data from an Independent Study of AC5 Surgical Hemostatic Device™ in Animals on Blood Thinners

AC5™ Quickly Stopped Bleeding in Second Research Study of Anticoagulant Treated Animals

WELLESLEY, MA – September 8, 2014 -- Arch Therapeutics, Inc. (OTCQB: ARTH) ("Arch" or the "Company"), developer of the AC5 Surgical Hemostatic Device™, announced that an independent third-party research group has obtained positive data from a preclinical study assessing the use of AC5™ in animals receiving an anticoagulant medication (i.e. blood thinner). These results were consistent with the results obtained from a recently completed Arch study that showed that AC5 quickly stopped bleeding from surgical wounds created in the livers of rats that had been treated with a clinically relevant dose of the drug heparin.

Dr. Rutledge Ellis-Behnke, the inventor who discovered the hemostatic properties of self-assembling peptides and one of the study investigators, has previously demonstrated that a synthetic self-assembling peptide could achieve hemostasis in less than 30 seconds in a range of tissues in animal experiments. However, the published literature assessing the use of self-assembling peptides has not until now adequately addressed the potential for hemostasis in the presence of anticoagulant therapy *in vivo*. The results of this new study support that AC5 can achieve rapid hemostasis in living animals that have undergone anticoagulant treatment with heparin. The average time to hemostasis of the anticoagulated animals was comparable to that of the animals that were not anticoagulated, with the difference between the groups being less than one second.

The research, which was sponsored by Arch Therapeutics, was performed at Semmelweis University Faculty of Medicine in Budapest, Hungary within the Department of Surgical Research and Techniques. The study team also included Rudolf Urbanics, MD, PhD, and Domokos Csukas, DVM. Dr. Urbanics is Head of the *in vivo* laboratory of SeroScience Ltd and of the Nanomedicine Research and Education Center at Semmelweis University, both located in Budapest, Hungary. Dr. Csukas is a veterinary doctor and Assistant Lecturer in the Department of Surgical Research and Techniques at the Faculty of Medicine of Semmelweis University in Budapest, Hungary, where he is also a PhD candidate. Dr. Ellis-Behnke is 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 Therapeutics.

Terrence W. Norchi, MD, President and CEO of Arch Therapeutics, said, "This study provides independent evidence that AC5 can stop bleeding in animals being treated with an anticoagulant. This additional research represents an

important confirmatory step by an outside group, highlighting an exciting feature of AC5 that differentiates it from many existing hemostatic solutions currently on the market. This is a key new finding in AC5's ongoing development path toward commercialization for use in humans."

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 AC5 Surgical Hemostatic Device ™, is being designed to achieve hemostasis in minimally invasive and open surgical procedures.

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 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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