

**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**

December 14, 2017

Date of report (Date of earliest event reported)

Axsome Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction
of incorporation)

001-37635

(Commission
File Number)

45-4241907

(IRS Employer
Identification No.)

**25 Broadway, 9th Floor
New York, New York**

(Address of principal executive offices)

10004

(Zip Code)

Registrant's telephone number, including area code **(212) 332-3241**

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- 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)).

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 8.01. Other Events.

On December 14, 2017, Axsome Therapeutics, Inc. (the "Company") issued a press release announcing that it had entered into a research collaboration with Duke University to evaluate AXS-05 in a Phase 2 clinical trial in smokers attempting to quit. The planned study is a randomized, double-blind, controlled trial evaluating the impact of AXS-05 on smoking behavior, and will be conducted at the Duke Center for Smoking Cessation. Initiation of the trial is anticipated in the first quarter of 2018.

The full text of the press release is filed as Exhibit 99.1 hereto and is incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit Number</u>	<u>Description</u>
99.1	Press release dated December 14, 2017.

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SIGNATURES

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

Axsome Therapeutics, Inc.

Dated: December 14, 2017

By: /s/ Herriot Tabuteau, M.D.
Name: Herriot Tabuteau, M.D.
Title: President and Chief Executive Officer

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Axsome Therapeutics Collaborates with World-Leading Nicotine Addiction Research Center for Phase 2 Trial of AXS-05 in Smoking Cessation

*Builds on preclinical research conducted at Duke University and clinical research conducted by Axsome
Smoking cessation is the third indication for AXS-05
Phase 2 trial initiation anticipated in the first quarter of 2018*

NEW YORK, December 14, 2017 (Globe Newswire) — Axsome Therapeutics, Inc. (NASDAQ: AXSM), a clinical-stage biopharmaceutical company developing novel therapies for the management of central nervous system (CNS) disorders, entered into a research collaboration with Duke University to evaluate AXS-05 in a Phase 2 clinical trial in smokers attempting to quit. AXS-05 is a novel, oral, fixed-dose combination of dextromethorphan and bupropion. This collaboration builds upon preclinical research conducted at Duke demonstrating positive effects of the dextromethorphan component of AXS-05 on nicotine self-administration, clinical work conducted by Axsome demonstrating increased dextromethorphan plasma concentrations with AXS-05, and the established efficacy of the bupropion component of AXS-05 in smoking cessation. Duke University is recognized as one of the world's leading centers for smoking cessation research, and its investigators have been at the forefront of developing medications to help smokers quit.

“Smoking is the leading cause of preventable death in the United States, and unfortunately current treatment options are limited” said James M. Davis, M.D., Medical Director of the Duke Center for Smoking Cessation, and principal investigator of the planned trial. “AXS-05 represents a potentially new medication class for the treatment of tobacco dependence that may have some advantages as compared to current treatments. If the Phase 2 and 3 clinical trial programs eventually demonstrate it to be a safe and effective treatment option, it could have the potential to enhance the treatment for smoking cessation. Preclinical and clinical evidence on the constituents of AXS-05 provide a promising rationale for evaluating its use as a treatment for smokers; we look forward to learning more about its activity in this upcoming trial.”

The planned study is a randomized, double-blind, controlled trial evaluating the impact of AXS-05 on smoking behavior, and will be conducted at the Duke Center for Smoking Cessation. Initiation of the trial is anticipated in the first quarter of 2018.

“Existing smoking cessation methods have had limited success, with quit rates often falling below 25 percent after six months,” said Jed Rose, Ph.D., Director of the Duke Center for Smoking Cessation, Research Professor of biological psychiatry, and co-creator of the nicotine patch. “There is an urgent need for more effective treatments. This collaboration with Axsome is an example of the type of translational research which can contribute to progress in solving the problem of tobacco addiction.”

Results of preclinical studies conducted at Duke University demonstrated that the dextromethorphan component of AXS-05 significantly reduced nicotine self-administration in nicotine-dependent rats in a dose-dependent manner ($p < 0.0005$ versus control) [1]. Results of pharmacokinetic clinical trials conducted by Axsome have demonstrated that, in human subjects, AXS-05 results in a significant increase in dextromethorphan plasma concentrations ($p < 0.0001$ versus administration of dextromethorphan as a single agent). Furthermore, bupropion, a component of AXS-05, has been found to be effective for smoking cessation in clinical trials. The preclinical and clinical efficacy of the individual components of AXS-05 combined with their positive pharmacokinetic interaction supports the potential for AXS-05 to be effective in the treatment of tobacco dependence in humans.

“We are delighted that the researchers at the Duke Center for Smoking Cessation have identified AXS-05 for evaluation as a new potential treatment for the millions of smokers who want to quit,” said Cedric O’Gorman, M.D., Senior Vice President of Clinical Development and Medical Affairs of Axsome. “This new indication reflects the potential applicability of AXS-05’s pharmacology to multiple CNS conditions.”

Smoking cessation is now the third indication for AXS-05, which is also being developed in late-stage clinical trials for treatment resistant depression and Alzheimer’s agitation.

About Smoking

Nearly 40 million American adults smoke and around 70% report that they want to quit. Tobacco use results in approximately 500,000 premature deaths each year in the U.S., according to the Centers for Disease Control and Prevention. Smoking is the single largest cause of premature deaths worldwide accounting for an estimated almost 20% of all deaths in developed countries [2]. Direct health care and lost productivity costs as a result of smoking total nearly \$300 billion a year in the U.S. alone. It is estimated that only 3 to 5% of cigarette smokers who attempt to quit without assistance are successful for 6 to 12 months, and that relapse rates remain above 80% even with current treatments [3].

About The Duke Center for Smoking Cessation

The Duke Center for Smoking Cessation (also known as DCSC) is a multidisciplinary center working to elucidate the biological mechanisms underlying tobacco addiction and to promote the development of more effective smoking cessation treatments. The DCSC is committed to researching novel treatments to help smokers break the addiction of nicotine. The Center’s director, Dr. Jed E. Rose, is a co-inventor of the nicotine patch and has been a pioneer in the field of nicotine and cessation research.

About AXS-05

AXS-05 is a novel, oral, investigational drug product under development for the treatment of central nervous system (CNS) disorders. AXS-05 utilizes Axsome’s technology of combining bupropion and dextromethorphan. Dextromethorphan is an NMDA receptor antagonist, sigma-1 receptor agonist, and inhibitor of the serotonin and norepinephrine transporters. Bupropion serves to increase the bioavailability of dextromethorphan, and is a norepinephrine and dopamine reuptake inhibitor, and a nicotinic acetylcholine receptor antagonist. AXS-05 is an investigational drug product not approved by the FDA.

About Axsome Therapeutics, Inc.

Axsome Therapeutics, Inc. is a clinical-stage biopharmaceutical company developing novel therapies for the management of central nervous system (CNS) disorders for which there are limited treatment options. Axsome's product candidate portfolio includes four clinical-stage candidates, AXS-02, AXS-05, AXS-06, and AXS-07. AXS-05 is currently in a Phase 3 trial in treatment resistant depression (TRD) and a Phase 2/3 trial in agitation in patients with Alzheimer's disease (AD). AXS-02 is currently in Phase 3 trials in complex regional pain syndrome (CRPS) and knee osteoarthritis (OA) associated with bone marrow lesions (BMLs) with an additional Phase 3 trial planned in chronic low back pain (CLBP) associated with Modic changes (MCs). AXS-02, AXS-05, AXS-06, and AXS-07 are investigational drug products not approved by the FDA. For more information, please visit the company website at www.axsome.com. The company may occasionally disseminate material, nonpublic information on the company website.

Forward Looking Statements

Certain matters discussed in this press release are "forward-looking statements". We may, in some cases, use terms such as "predicts," "believes," "potential," "continue," "estimates," "anticipates," "expects," "plans," "intends," "may," "could," "might," "will," "should" or other words that convey uncertainty of future events or outcomes to identify these forward-looking statements. In particular, the Company's statements regarding trends and potential future results are examples of such forward-looking statements. The forward-looking statements include risks and uncertainties, including, but not limited to, the success, timing and cost of our ongoing clinical trials and anticipated clinical trials for our current product candidates, including statements regarding the timing of initiation and completion of the trials, fertility analyses and receipt of interim results; the timing of and our ability to obtain and maintain U.S. Food and Drug Administration or other regulatory authority approval of, or other action with respect to, our product candidates; the Company's ability to successfully defend its intellectual property or obtain the necessary licenses at a cost acceptable to the Company, if at all; the successful implementation of the Company's research and development programs and collaborations; the success of the Company's license agreements; the acceptance by the market of the Company's product candidates, if approved; and other factors, including general economic conditions and regulatory developments, not within the Company's control. The factors discussed herein could cause actual results and developments to be materially different from those expressed in or implied by such statements. The forward-looking statements are made only as of the date of this press release and the Company undertakes no obligation to publicly update such forward-looking statements to reflect subsequent events or circumstance.

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[2] Dani JA, Heinemann S. Molecular and cellular aspects of nicotine abuse. *Neuron.* 1996 May;16(5):905-8.

[3] Hughes JR, Keely J, Naud S. Shape of the relapse curve and long-term abstinence among untreated smokers. *Addiction.* 2004 Jan;99(1):29-38.

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