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

May 8, 2018
Date of report (Date of earliest event reported)

Axsome Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**001-37635**	**45-4241907**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

25 Broadway, 9th Floor **New York, New York**	**10004**
(Address of principal executive offices)	(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:

o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425).

o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12).

o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b)).

o 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 x

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. x

Item 2.02. Results of Operations and Financial Condition

On May 8, 2018, Axsome Therapeutics, Inc. (the "Company") issued a press release announcing its financial results for the three months ended March 31, 2018 and an update on the Company's operations. The Company is furnishing a copy of the press release, which is attached hereto as Exhibit 99.1.

In accordance with General Instruction B.2 of Form 8-K, the information included in this Current Report on Form 8-K (including Exhibit 99.1 hereto), shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise

subject to the liabilities of that section, nor shall it be deemed incorporated by reference into any filing made by the Company under the Exchange Act or Securities Act of 1933, as amended, except as shall be expressly set forth by specific reference in such a filing.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Exhibit Number	Description
99.1	Press release dated May 8, 2018.

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.

Axsome Therapeutics, Inc.

Dated: May 8, 2018

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

AXSOME THERAPEUTICS

Axsome Therapeutics Reports First Quarter 2018 Financial Results and Provides Business Update

Company to host conference call today at 8:00 AM Eastern

NEW YORK, May 08, 2018 (Globe Newswire) — Axsome Therapeutics, Inc. (NASDAQ: AXSM), a clinical-stage biopharmaceutical company developing novel therapies for the management of central nervous system (CNS) disorders, today reported financial results for the first quarter ended March 31, 2018.

"We have achieved several key clinical milestones in the first five months of 2018 and are on track to announce results from two late-stage clinical trials in the second half of the year. The achievements made to date include the positive interim futility analysis for the STRIDE-1 Phase 3 trial in treatment resistant depression, the initiation of enrollment in the Phase 2 trial of AXS-05 for smoking cessation treatment, and the further expansion of our pipeline with the positive Phase 1 results with AXS-09, our new CNS product candidate," said Herriot Tabuteau, MD, Chief Executive Officer of Axsome. "We intend to continue this momentum in the second half of 2018, with the anticipated launch of a Phase 3 trial of AXS-07 in migraine, the first interim analysis of our ADVANCE-1 Phase 2/3 trial of AXS-05 in Alzheimer's disease agitation, and the next and final interim analysis of the STRIDE-1 Phase 3 trial, which will be conducted to assess efficacy."

Pipeline Update

Axsome is developing a portfolio of differentiated, patent-protected, central nervous system (CNS) product candidates. CNS disorders are distressing and difficult-to-treat. The patients with them are often underserved with many having no approved or satisfactory treatment options. Axsome accelerates the development of new CNS medicines by utilizing proprietary medicinal chemistry and formulation technologies, novel mechanisms of action, and well-characterized molecules, combined with human proof-of-concept data and innovative clinical trial designs. Axsome's technologies include metabolic inhibition, MoSEIC™ delivery, chiral chemistry and formulation, and proprietary chemical synthesis and analysis. Our pipeline includes five clinical-stage product candidates.

- **AXS-05:** Axsome is evaluating AXS-05 in three separate indications: treatment resistant depression (TRD), Alzheimer's disease (AD) agitation, and smoking cessation. AXS-05 is a novel, oral, investigational medicine consisting of dextromethorphan (an NMDA receptor antagonist, sigma-1 receptor agonist, and serotonin and norepinephrine reuptake inhibitor) and bupropion (a norepinephrine and dopamine reuptake inhibitor, which also increases the bioavailability of dextromethorphan), under development for the treatment of CNS disorders. AXS-05 has been granted U.S. Food and Drug Administration (FDA) Fast Track designations for the treatment of TRD and for the treatment of AD agitation.

  TRD: Axsome is enrolling the STRIDE-1 study, a Phase 3, multicenter, randomized, double-blind, active-controlled trial to assess the efficacy and safety of AXS-05 in TRD, defined as major depressive disorder which has failed to respond to two or more antidepressant treatments. To date, just over 45% of the target number of subjects have been randomized.

  In April 2018, an interim futility analysis of the STRIDE-1 study was conducted by an independent data monitoring committee (IDMC) resulting in a positive outcome. Based on the results of the analysis, the IDMC recommended that the trial continue. The IDMC also reviewed the available safety information from the study and indicated that, based on the interim results, AXS-05 appeared safe and well-tolerated.

  A second planned interim analysis will be performed on the first approximately 60% of the target number of subjects to assess efficacy. Results of this next and final interim analysis are expected in the second half of 2018.

  AD Agitation: Axsome is enrolling the ADVANCE-1 study, a Phase 2/3, multicenter, randomized, double-blind, controlled trial to evaluate the efficacy and safety of AXS-05 in patients with agitation associated with AD.

  ADVANCE-1 incorporates two interim analyses to be performed by an IDMC. The first interim analysis will be performed on the first approximately 30% of the target number of subjects to assess the assumptions used to

determine the sample size of the study. The second interim analysis will be performed on the first approximately 60% of the target number of subjects to assess efficacy. Results of the first interim analysis are expected in the second half of 2018.

Smoking Cessation: In April 2018, the first patient was enrolled in a Phase 2, randomized, double-blind, controlled trial of AXS-05 for smoking cessation treatment. Approximately 60 smokers interested in quitting will be randomized in a 1:1 ratio to receive either AXS-05 or bupropion for 4 weeks. The primary outcome measure is the change in smoking intensity. The trial is being conducted under a research collaboration between Duke University and Axsome Therapeutics. Top-line results are anticipated in 2019.

- **AXS-09:** In February 2018, Axsome announced positive topline results from a Phase 1 pharmacokinetic study of a new drug candidate, AXS-09 (esbupropion and dextromethorphan), which is being developed for the treatment of CNS disorders. AXS-09 contains the chirally pure *S*-enantiomer of bupropion, as compared to the company's firstgeneration product candidate AXS-05 which contains racemic bupropion (equal amounts of the *S*- and *R*-enantiomers). AXS-09 resulted in substantial increases in dextromethorphan plasma concentrations, the trial's primary endpoint, into a potentially therapeutic range with repeated dosing ($p<0.0001$ day 1 versus day 8). The increased plasma concentrations of dextromethorphan after dosing with AXS-09 were comparable to those achieved with AXS-05. Results of this Phase 1 trial coupled with preclinical data also indicate the potential for enhanced absorption and therapeutic effect of the *S*-enantiomer as compared to the *R*-enantiomer. AXS-09 was well tolerated with no serious adverse events reported in the trial.

- **AXS-07:** Axsome is developing AXS-07 for the acute treatment of migraine. AXS-07 is a novel, oral, rapidly absorbed, investigational medicine consisting of MoSEIC meloxicam and rizatriptan. The distinct mechanism of action and rapid absorption of MoSEIC meloxicam, combined with the

known efficacy of rizatriptan, is expected to result in rapid, superior and consistent relief of migraine pain, with lower symptom recurrence, as compared to currently available therapies. Axsome anticipates starting a Phase 3 trial of AXS-07 for the acute treatment of migraine in 2018.

· **AXS-02:** Axsome is developing AXS-02 (disodium zoledronate tetrahydrate) in two separate indications: knee osteoarthritis (OA) associated with bone marrow lesions (BMLs), and chronic low back pain (CLBP) associated with Modic changes (MCs). AXS-02 is a potent osteoclast inhibitor being developed as an oral, non-opioid, targeted, potentially first-in-class therapeutic for chronic pain. AXS-02 has been granted U.S. Food and Drug Administration (FDA) Fast Track designations for the treatment of knee OA associated with BMLs.

Knee OA associated with BMLs: AXS-02 is being evaluated in the COAST-1 Phase 3 trial for the treatment of the pain of knee OA associated with BMLs. An IDMC conducted an interim analysis of the COAST-1 trial and recommended that it be continued to full enrollment. Screening in the trial was paused prior to the interim analysis and is anticipated to resume after the final readout from the STRIDE-1 trial, as previously disclosed.

· **AXS-06:** Axsome is developing AXS-06 (MoSEIC meloxicam and esomeprazole) for the relief of the signs and symptoms of OA and Rheumatoid Arthritis (RA), and the reduction in the risk of developing upper gastrointestinal ulcers in patients at risk of developing nonsteroidal anti-inflammatory drug (NSAID) associated upper gastrointestinal ulcers. AXS-06 is an oral, non-opioid, rapidly-absorbed, once-daily, COX-2 preferential pain therapeutic with a gastroprotectant. Axsome received, from the FDA, Pre-IND written guidance on a proposed clinical developmental program for AXS-06. Based on this guidance, Axsome believes that AXS-06 is Phase 3-ready.

Scientific Meeting Presentations

· **American Society for Experimental Neurotherapeutics (ASENT):** In March 2018, Axsome delivered three presentations, two oral and one poster, at the 20th Annual Meeting of ASENT, held in Rockville, MD. These presentations reviewed the mechanistic rationale, pharmacokinetic data, and functional clinical data which form the scientific basis for the ongoing Phase 3 trial of AXS-05 in treatment resistant depression, and for the ongoing Phase 2/3 trial of AXS-05 in agitation associated with Alzheimer's disease.

AXS-05 R&D Day

· In April 2018, Axsome held a research and development (R&D) day with key opinion leaders (KOLs), focused on AXS-05 and unmet needs in depression, agitation associated with Alzheimer's disease, and nicotine dependence.

The R&D day featured presentations by Stephen M. Stahl, MD, PhD, DSc (Adjunct Professor of Psychiatry, University of California San Diego), Maurizio Fava, MD (Executive Vice Chair of the Department of Psychiatry, Massachusetts General Hospital), Marc Agronin, MD (Vice President of Behavioral Health and Clinical Research at Miami Jewish Health), and James Davis, MD (Medical Director of the Duke Center for Smoking Cessation, Duke University School of Medicine). Dr. Stahl discussed the psychopharmacology of AXS-05 and its potential clinical implications. Dr. Fava discussed approaches that target multiple mechanisms of action to address treatment resistant depression, and the potential utility of AXS-05 for this condition. Dr. Agronin discussed the potential of AXS-05 for the treatment of agitation associated with Alzheimer's disease. Dr. Davis discussed unmet needs in smoking cessation and the potential for AXS-05. A webcast archive and slides of the event are currently available on the investor page of the Company's website at axsome.com.

Corporate Update

· In April 2018, Axsome announced the appointment of Nick Pizzie, CPA, MBA, as Chief Financial Officer effective May 16, 2018. Prior to joining Axsome, Mr. Pizzie was the Vice President and Chief Financial Officer of Pierre Fabre USA, the U.S. affiliate of Pierre Fabre, a $2.5 billion global pharmaceutical company. Previously, he was Senior Finance Director at Immucor. Prior to Immucor, he held positions of increasing responsibility in finance and accounting at Merck and Pfizer.

Anticipated Clinical Milestones

· **Clinical Trial Initiations:**

  · Phase 3 clinical trial of AXS-07 in migraine (2018)

· **Clinical Trial Readouts:**

  · Phase 3 STRIDE-1 trial of AXS-05 in TRD, interim efficacy analysis (2H 2018)

  · Phase 2/3 ADVANCE-1 trial of AXS-05 in AD agitation, interim analysis (2H 2018)

  · Phase 3 STRIDE-1 trial of AXS-05 in TRD, top-line data (2H 2018 — 1H 2019)

  · Phase 2/3 ADVANCE-1 trial of AXS-05 in AD agitation, interim efficacy analysis (2019)

  · Phase 2 trial of AXS-05 in smoking cessation, top-line data (2019)

  · Phase 2/3 ADVANCE-1 trial of AXS-05 in AD agitation, top-line data (2H 2019 — 1H 2020)

First Quarter 2018 Financial Results

· **Research and development (R&D) expenses:** R&D expenses were $4.8 million for the quarter ended March 31, 2018 and $6.0 million for the comparable period in 2017. The decrease was primarily due to a reduction in the costs of our previously initiated clinical trials, which was partially offset by the conduct of our ADVANCE-1 trial, the conduct of pre-clinical work on AXS-05, and manufacturing costs associated with our product candidates.

- **General and administrative (G&A) expenses:** G&A expenses were $2.4 million for the quarter ended March 31, 2018 and $1.7 million for the comparable period in 2017. The increase in G&A expenses was primarily due to higher intellectual property and legal expenses.

- **Net loss:** Net loss was $4.8 million, or $(0.19) per share for the quarter ended March 31, 2018, compared to a net loss of $8.0 million, or $(0.41) per share for the comparable period in 2017.

- **Cash:** At March 31, 2018, Axsome had $26.6 million of cash compared to $34.0 million of cash at December 31, 2017.

- **Shares outstanding:** At March 31, 2018, Axsome had 25,549,892 shares of common stock outstanding.

- **Financial guidance:** Axsome believes that its cash at March 31, 2018 will be sufficient to fund the company's anticipated operations, based on its current operating plans, into the third quarter of 2019.

Conference Call Information

Axsome will host a conference call and webcast today at 8:00 AM Eastern to discuss first quarter 2018 financial results as well as to provide a corporate update. To participate in the live conference call, please dial (844) 698-4029 (toll-free domestic) or (647) 253-8660 (international), and use the passcode 4699987. The live webcast can be accessed on the "Webcasts & Presentations" page of the "Investors" section of the Company's website at axsome.com. A replay of the webcast will be available for approximately 30 days following the live event.

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 five clinical-stage candidates, AXS-02, AXS-05, AXS-06, AXS-07, and AXS-09. AXS-05 is currently in a Phase 3 trial in treatment resistant depression (TRD), a Phase 2/3 trial in agitation associated with Alzheimer's disease (AD), and a Phase 2 trial in smoking cessation. AXS-02 is currently in a Phase 3 trial in 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-07 is being developed for the acute treatment of migraine. AXS-06 is being developed for the treatment of osteoarthritis and rheumatoid arthritis and for the reduction of the risk of NSAID-associated gastric ulcers. AXS-02, AXS-05, AXS-06, AXS-07, and AXS-09 are investigational drug products not approved by the FDA. For more information, please visit the Company's website at 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, interim analyses and completion of the trials; 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.

Axsome Therapeutics, Inc.
Selected Consolidated Financial Data

Statements of Operations Information:

	Three months ended March 31,	
	2018	2017
Operating expenses:		
Research and development	$ 4,752,511	$ 5,985,219
General and administrative	2,410,699	1,686,814
Total operating expenses	7,163,210	7,672,033
Loss from operations	(7,163,210)	(7,672,033)
Interest and amortization of debt discount (expense)	(315,349)	(323,006)
Change in fair value of warrant liability	2,673,000	—
Net loss	$ (4,805,559)	$ (7,995,039)
Net loss per common share, basic and diluted	$ (0.19)	$ (0.41)
Weighted average common shares outstanding, basic and diluted	25,501,188	19,537,897

Balance Sheet Information:

	March 31, 2018	December 31, 2017
Cash	$ 26,632,695	$ 34,021,123
Total assets	27,939,296	35,555,564
Loan payable, current and long-term	9,207,499	9,932,351
Accumulated deficit	(81,390,402)	(76,584,843)
Stockholders' equity	$ 12,586,154	$ 16,717,223

Axsome Contact:
Mark Jacobson
Senior Vice President, Operations
Axsome Therapeutics, Inc.
25 Broadway, 9th Floor
New York, NY 10004
Tel: 212-332-3243
Email: mjacobson@axsome.com
www.axsome.com