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

November 9, 2018

Final Phase 3 results of AXS-05 in treatment resistant depression now anticipated in 1Q 2019

Final Phase 2 results of AXS-05 in major depressive disorder anticipated around year-end 2018

Phase 2/3 interim analysis results of AXS-05 in Alzheimer's disease agitation anticipated in 4Q 2018

Phase 3 trial of AXS-07 in acute migraine anticipated to start in 4Q 2018 to 1Q 2019

Phase 2 trial of AXS-12 in narcolepsy anticipated to start in 4Q 2018

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

NEW YORK, Nov. 09, 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 third quarter ended September 30, 2018.

"Over the past several months, we have significantly advanced and broadened our late-stage CNS pipeline, now consisting of four product candidates which will soon be in efficacy trials in six different indications," said Herriot Tabuteau, MD, Chief Executive Officer of Axsome. "We announced the newest addition to our CNS portfolio, AXS-12 for the treatment of narcolepsy, which has recently received FDA Orphan Drug designation. During the same period, we also positioned our non-CNS assets for enhanced value creation by placing them in a newly formed business unit, Axsome PPC."

"Through a recently completed equity offering with institutional investors, we have extended our cash runway into the first quarter of 2020, beyond several important clinical milestones," continued Dr. Tabuteau. "We are pleased to announce that we now expect final results from the Phase 3 STRIDE-1 trial of AXS-05 in treatment resistant depression in the first quarter of 2019, versus previous guidance of the first half of 2019. The acceleration of this pivotal trial readout is enabled by our decision to forgo the previously planned second interim analysis in favor of a final analysis. For the Phase 2/3 ADVANCE-1 trial of AXS-05 in Alzheimer's disease agitation, we are on track to report results of the interim futility analysis in the fourth quarter. In addition, topline results from the Phase 2 ASCEND trial of AXS-05 in major depressive disorder are expected around year end, and topline results from the Phase 2 trial of AXS-05 in smoking cessation are anticipated in the first quarter of 2019. We anticipate launching our planned Phase 3 trial of AXS-07 in migraine in the fourth quarter of this year or the first quarter of 2019. Finally, we continue to expect to launch a Phase 2 trial of AXS-12 in narcolepsy before the end of this year, with data from this trial expected in the first half of 2019."

CNS 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 who suffer from these disorders 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 CNS pipeline includes four differentiated, clinical-stage product candidates.

- **AXS-05:** Axsome is evaluating AXS-05 in four separate indications: treatment resistant depression (TRD), Alzheimer's disease (AD) agitation, major depressive disorder (MDD), 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). 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.

  A successful interim analysis for futility was conducted in April 2018 which resulted in a recommendation by an independent data monitoring committee (IDMC) to continue the STRIDE-1 study, and a second interim analysis for efficacy was planned. Although the target enrollment for the second interim analysis has been achieved, this interim analysis will

not be performed in favor of a final analysis at approximately 250 subjects. Forgoing the second interim analysis preserves statistical power and, with a lower than expected observed drop-out rate, enables a reduction in the total planned number of subjects for the trial. Consequently, anticipated topline results are now expected in the first quarter of 2019, versus previous guidance of the first half of 2019. To date, approximately 80% of the new target number of subjects have been randomized.

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 for futility on the first approximately 30% of the target number of subjects. 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 fourth quarter of 2018.

MDD: Axsome is enrolling the ASCEND study, a Phase 2, randomized, double-blind, active-controlled trial of AXS-05 in patients with MDD. Patients are randomized in a 1:1 ratio to receive AXS-05 or bupropion for 6 weeks. Assessments that will be conducted throughout the study include safety parameters, the Montgomery-Åsberg Depression Rating Scale (MADRS), other clinician-rated scales, as well as patient-reported outcome measures. Enrollment in the ASCEND study is nearing completion and top-line results are anticipated around year-end 2018.

Smoking Cessation: AXS-05 is being evaluated in a Phase 2, randomized, double-blind, controlled trial 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. Top-line results are anticipated in the first quarter of 2019.

- **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 the fourth quarter of 2018 or the first quarter of 2019.

- **AXS-12:** In October 2018, Axsome announced its next CNS product candidate, AXS-12 (reboxetine), which it is developing for the treatment of narcolepsy. AXS-12 is a novel, oral, highly selective and potent norepinephrine reuptake inhibitor. Narcolepsy is a serious, debilitating, neurological condition characterized by excessive daytime sleepiness and cataplexy, which is a sudden reduction or loss of muscle tone while a patient is awake. The potential utility of AXS-12 in narcolepsy is supported by positive pre-clinical and preliminary clinical results in narcolepsy, and an extensive positive clinical safety record in Europe and in over 40 countries where it is approved for the treatment of depression. Reboxetine has not been approved in the U.S. for any indication.

  Axsome recently received Orphan Drug Designation from the FDA for AXS-12 for the treatment of narcolepsy. Axsome anticipates starting a Phase 2 trial of AXS-12 in patients with narcolepsy in the fourth quarter of 2018, with top-line results anticipated in the first half of 2019.

Scientific Meeting Presentations

- **CNS Summit:** In November 2018, Axsome delivered a poster presentation at CNS Summit 2018, held in Boca Raton, FL. The presentation highlighted the current and planned clinical trials with Axsome's AXS-05 and AXS-07 product candidates in depression, Alzheimer's disease agitation, smoking cessation, and migraine.

- **European College of Neuropsychopharmacology (ECNP):** In October 2018, Axsome delivered a poster presentation at the 2018 ECNP Annual Congress, held in Barcelona, Spain. The presentation highlighted the effect of the dextromethorphan component of AXS-05 on neuronal nicotinic receptors, as well as the clinical and preclinical rationale for developing AXS-05 as an aid to smoking cessation treatment.

- **World Psychiatric Associate (WPA):** In September 2018, Axsome delivered an oral presentation at the 2018 WPA's annual World Congress of Psychiatry, held in Mexico City, Mexico. The presentation highlighted pharmacokinetic data from Axsome's Phase 1 trials of AXS-05 and the scientific rationale for its development in TRD, agitation associated with AD, and nicotine dependence.

- **International Association for the Study of Pain (IASP):** In September 2018, Axsome delivered a poster presentation at the 2018 IASP Annual World Congress, held in Boston, MA. Data from a Phase 1 pharmacokinetic trial of AXS-06 were presented, as well as an overview of Axsome's MoSEIC delivery technology.

Key Opinion Leader Events

- **AXS-05**: In October 2018, Axsome held a research and development (R&D) day with key opinion leaders (KOLs), focused on AXS-05 and unmet needs in agitation associated with Alzheimer's disease. The R&D day featured presentations by Jeffrey Cummings, MD, ScD (Director of the Center for Neurodegeneration and Translational Neuroscience, Cleveland Clinic) and Clive Ballard, MBChB, MMedSci, MRCPsych, MD, FMedSci (Pro-Vice-Chancellor, University of Exeter). Dr. Cummings discussed the prevalence and consequences of Alzheimer's disease agitation and the potential of AXS-05 for the condition. Dr. Ballard discussed the pharmacological management of behavioral and psychological symptoms in Alzheimer's disease patients. An archived webcast of the event, with slides, can be accessed on the "Webcasts & Presentations" page of the "Investors" section of Axsome's website at axsome.com.

- **AXS-12:** In October 2018, Axsome hosted a conference call and webcast with a KOL, focused on AXS-12 and unmet needs in narcolepsy. The call and webcast featured a presentation by Michael J. Thorpy, MB, ChB (Professor of Neurology at Albert Einstein College of Medicine and President of the New York State Society of Sleep Medicine) who discussed the clinical features of and current treatment landscape for narcolepsy, and the potential of AXS-12 for the condition. An archived webcast of the call, with slides, can be accessed on the "Webcasts & Presentations" page of the "Investors" section of Axsome's website at axsome.com.

Corporate Update

- **Axsome PPC:** In October 2018, Axsome announced that it will focus on advancing its growing core CNS portfolio. As a result, Axsome has created Axsome Pain and Primary Care (Axsome PPC), a new business unit to house, manage, develop and enhance the value of Axsome's non-CNS assets. The pain and primary care assets in Axsome PPC include three Phase 3-stage product candidates and related intellectual property. Two of the product candidates (AXS-06 and AXS-02) are being developed directly by Axsome, and one of the candidates (neridronate) is covered by Axsome's intellectual property portfolio.

  AXS-06 is a Phase 3-ready, oral, non-opioid, rapidly absorbed, once-daily, investigational medicine, consisting of MoSEIC™ meloxicam and esomeprazole, which is being developed for the treatment of chronic pain. AXS-02 (disodium zoledronate tetrahydrate) is a potent, orally administered, osteoclast inhibitor. It is being developed as an oral, very long-acting treatment for osteoporosis; and as an oral, non-opioid, targeted, potentially first-in-class therapeutic for chronic pain. Neridronate is an intravenously administered bisphosphonate compound whose use for the treatment of certain pain conditions, including complex regional pain syndrome (CRPS), is covered by 21 issued Axsome patents which provide protection out to 2033. Neridronate is currently being studied in two pivotal Phase 3 trials for the treatment of CRPS by Grünenthal GmbH.

- **Registered Direct Offering:** In October 2018, Axsome completed a registered direct offering of 2,966,667 shares of its common stock at a purchase price of $3.00 per share, with certain existing and other institutional accredited investors. Participating investors included Armistice Capital, Lincoln Park Capital, and Sio Capital Management. The net proceeds from the offering were approximately $8.8 million.

Anticipated Clinical Milestones

- **Clinical Trial Initiations:**

  • Phase 3 clinical trial of AXS-07 in migraine (4Q 2018 – 1Q 2019)

  • Phase 2 clinical trial of AXS-12 in narcolepsy (4Q 2018)

- **Clinical Trial Readouts:**

  • Phase 2/3 ADVANCE-1 trial of AXS-05 in AD agitation, interim analysis (4Q 2018)

  • Phase 2 ASCEND trial of AXS-05 in MDD, top-line data (Year-end 2018)

  • Phase 3 STRIDE-1 trial of AXS-05 in TRD, top-line data (1Q 2019)

  • Phase 2 trial of AXS-05 in smoking cessation, top-line data (1Q 2019)

• Phase 2 trial of AXS-12 in narcolepsy, top-line data (1H 2019)

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

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

Third Quarter 2018 Financial Results

- **Research and development (R&D) expenses:** R&D expenses were $6.0 million for the quarter ended September 30, 2018 and $4.5 million for the comparable period in 2017. The increase was primarily due to the progress of our STRIDE-1 and ADVANCE-1 trials, the initiation and conduct of our ASCEND trial, and costs related to our AXS-07 product candidate.

- **General and administrative (G&A) expenses:** G&A expenses were $2.2 million for the quarter ended September 30, 2018 and $1.8 million for the comparable period in 2017. The increase in G&A expenses was primarily due to higher intellectual property and legal expenses, external fees associated with operating as a public company, as well as an increase in personnel costs.

- **Net loss:** Net loss was $8.3 million, or $(0.31) per share for the quarter ended September 30, 2018, compared to a net loss of $6.4 million, or $(0.27) per share for the comparable period in 2017.

- **Cash:** At September 30, 2018, Axsome had $15.2 million of cash. Including proceeds from the recently completed registered direct offering, Axsome's pro forma cash balance was $23 million, which compares to $20.4 million of cash at June 30, 2018.

- **Shares outstanding:** At September 30, 2018, Axsome had 26,458,662 shares of common stock outstanding.

- **Financial guidance:** Axsome believes that its current cash will be sufficient to fund its anticipated operations, based on its current operating plans, into the first quarter of 2020.

Conference Call Information

Axsome will host a conference call and webcast today at 8:00 AM Eastern to discuss third 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 conference ID 9186796. 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 core CNS product candidate portfolio includes four clinical-stage candidates, AXS-05, AXS-07, AXS-09, and AXS-12. 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), a Phase 2 trial in Major Depressive Disorder (MDD), and a Phase 2 trial in smoking cessation. AXS-07 is being developed for the acute treatment of migraine. AXS-12 is being developed for the treatment of the symptoms of narcolepsy. The Axsome Pain and Primary Care business unit (Axsome PPC) houses Axsome's pain and primary care assets, including AXS-02 and AXS-06, and intellectual property which covers these and related product candidates and molecules being developed by Axsome and others. AXS-02 is being developed for osteoporosis, the pain of knee osteoarthritis, and chronic low back pain. AXS-06 is being developed for osteoarthritis and rheumatoid arthritis. AXS-02, AXS-05, AXS-06, AXS-07, AXS-09, and AXS-12 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". The Company 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 the Company's ongoing clinical trials and anticipated clinical trials for its current product candidates, including statements regarding the timing of initiation, interim analyses and completion of the trials, futility analyses and receipt of interim results, which are not necessarily indicative of the final results of the Company's ongoing clinical trials; the Company's ability to fund additional clinical trials to continue the advancement of its product candidates; the timing of and the Company's ability to obtain and maintain U.S. Food and Drug Administration or other regulatory authority approval of, or other action with respect to, its product candidates; the Company's expected cash runway; 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 September 30,	
	2018	**2017**
Operating expenses:		
Research and development	$ 6,040,780	$ 4,471,126
General and administrative	2,202,679	1,826,290
Total operating expenses	8,243,459	6,297,416
Loss from operations	(8,243,459)	(6,297,416)
Interest and amortization of debt discount (expense)	(270,933)	(343,234)
Tax credit	217,418	207,114
Change in fair value of warrant liability	15,000	—
Net loss	$ (8,281,974)	$ (6,433,536)
Net loss per common share, basic and diluted	$ (0.31)	$ (0.27)
Weighted average common shares outstanding, basic and diluted	26,325,904	23,634,040

Balance Sheet Information:

	September 30, 2018	**December 31, 2017**
Cash	$ 15,220,764	$ 34,021,123
Total assets	16,125,828	35,555,564
Loan payable, current and long-term	7,725,931	9,932,351
Accumulated deficit	(97,953,292)	(76,584,843)
Stockholders' equity	$ 742,757	$ 16,717,223

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