
**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 30, 2019
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.)

200 Broadway, 3rd Floor
New York, New York
(Address of principal executive offices)

10038
(Zip Code)

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

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

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of each class:</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered:</u>
Common Stock, Par Value \$0.0001 Per Share	AXSM	The Nasdaq Global Market

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 30, 2019, Axsome Therapeutics, Inc. (the “Company”) issued a press release announcing that AXS-07 met the prespecified co-primary endpoints in the Company’s MOMENTUM Phase 3 trial in migraine patients with a history of inadequate response to prior acute treatments. The Company will host a conference call at 8:00 a.m. ET on December 30, 2019 to discuss the topline results of the MOMENTUM trial.

The full text of the press release is filed as Exhibit 99.1 hereto and is incorporated herein by reference. A copy of the presentation that the Company will use in connection with the conference call is filed as Exhibit 99.2 hereto and is incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press Release dated December 30, 2019.
99.2	MOMENTUM Presentation.

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: December 30, 2019

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



Axsome Therapeutics Announces AXS-07 Achieves Co-Primary and Key Secondary Endpoints in MOMENTUM Phase 3 Migraine Trial in Patients with History of Inadequate Response

Demonstrated statistical significance on regulatory co-primary endpoints of pain freedom ($p < 0.001$) and freedom from most bothersome symptom ($p = 0.002$) at 2 hours, compared to placebo

Demonstrated superiority to rizatriptan active comparator on key secondary endpoint of sustained pain freedom 2-24 hours after dosing ($p = 0.038$)

Demonstrated greater and more sustained migraine pain relief than rizatriptan ($p = 0.006$)

Rapidly relieved migraine pain; significantly reduced use of rescue medication compared to rizatriptan ($p < 0.001$)

Positive results support NDA filing of AXS-07 in the acute treatment of migraine, anticipated in 2H 2020

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

NEW YORK, December 30, 2019 (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 announced that AXS-07, Axsome's novel, oral, multi-mechanistic investigational medicine for the acute treatment of migraine, met the two regulatory co-primary endpoints and significantly improved migraine pain and most bothersome symptoms as compared to placebo in the MOMENTUM Phase 3 trial. AXS-07 also met the key secondary endpoint, demonstrating statistically significant superiority to the active comparator rizatriptan on sustained freedom from migraine pain.

MOMENTUM was a randomized, double-blind, placebo- and active-controlled trial which enrolled only patients with a history of inadequate response to prior acute migraine treatments, assessed using the Migraine Treatment Optimization Questionnaire (mTOQ-4). A total of 1,594 patients were randomized in a 2:2:2:1 ratio to AXS-07 (20 mg MoSEIC™ meloxicam/10 mg rizatriptan), rizatriptan (10 mg), MoSEIC™ meloxicam (20 mg), or placebo, to treat a single migraine attack of moderate or severe intensity. In addition to a history of inadequate response, enrolled patients exhibited a high rate of characteristics that are strongly associated with poor treatment outcomes including cutaneous allodynia (75.4%), severe migraine pain intensity (41.2%), obesity (43.7%), and morning migraine (36.6%). The study was conducted pursuant to a U.S. Food and Drug Administration (FDA) Special Protocol Assessment (SPA). Rizatriptan, an active comparator in the trial, is considered to be the fastest acting oral triptan and one of the most effective medications currently available for the acute treatment of migraine [1].

AXS-07 met the two regulatory co-primary endpoints by demonstrating, with high statistical significance, a greater percentage of patients as compared to placebo achieving pain freedom (19.9% versus 6.7%, $p < 0.001$) and absence of most bothersome symptom (36.9% versus 24.4%, $p = 0.002$), 2 hours after dosing. Superiority of AXS-07 to rizatriptan and MoSEIC™ meloxicam (component contribution) was established as specified in the SPA, by demonstration of a greater percentage of AXS-07 patients achieving sustained pain freedom from 2 to 24 hours after dosing, compared to rizatriptan and MoSEIC™ meloxicam, as well as to placebo (16.1%, 11.2%, 8.8% and 5.3%, respectively; $p = 0.038$, $p = 0.001$, and $p < 0.001$, respectively versus AXS-07). The positive results on both co-primary endpoints along with the demonstration of component contribution support the filing of an NDA for AXS-07 in the acute treatment of migraine.

AXS-07 provided substantially greater and more sustained migraine pain relief compared to placebo and rizatriptan, which translated to a significant reduction in rescue medication use for AXS-07 compared to placebo and rizatriptan. The percentage of patients experiencing sustained pain relief from 2 to 24 hours after dosing was 53.3% for AXS-07, compared to 33.5% for placebo and 43.9% for rizatriptan ($p < 0.001$, $p = 0.006$, respectively versus AXS-07). Sustained pain relief from 2 to 48 hours was also experienced by a statistically significantly greater proportion of AXS-07 patients (46.5%), compared to placebo (31.1%) and rizatriptan (36.5%) patients ($p < 0.001$, $p = 0.003$, respectively versus AXS-07). Rescue medication was used by 23.0% of AXS-07 patients, compared to 43.5% of placebo and 34.7% of rizatriptan patients ($p < 0.001$ for each group versus AXS-07).

AXS-07 provided rapid relief of migraine pain with the percentage of patients achieving pain relief with AXS-07 being numerically greater than with rizatriptan at every time point measured starting at 15 minutes, and statistically significantly greater than with rizatriptan by 60 minutes ($p=0.04$). The proportions of patients experiencing pain relief 1.5 hours after dosing were 60.5% for AXS-07 compared to 52.5% for rizatriptan and 48.3% for placebo ($p=0.019$, $p=0.004$, respectively versus AXS-07). AXS-07 was statistically significantly superior to rizatriptan on several other secondary endpoints including Patient Global Impression of Change (PGI-C) ($p=0.022$), and return to normal functioning at 24 hours ($p=0.027$).

"In the MOMENTUM trial, AXS-07 provided greater and more lasting migraine pain relief than rizatriptan. Given that rizatriptan is one of the most effective triptans and that the study enrolled patients with difficult-to-treat migraine, this finding is impressive" said Richard B. Lipton, M.D., Professor and Vice Chair of Neurology, and Director of the Montefiore Headache Center, at the Albert Einstein College of Medicine. "Many patients experience a suboptimal response to their current acute migraine treatments, placing them at increased risk of headache related disability and progression to chronic migraine, factors associated with increased healthcare costs. The results of this study suggest that AXS-07 may provide an important treatment option for people with difficult-to-treat migraine."

AXS-07 was safe and well tolerated in the trial. The most commonly reported adverse events with AXS-07 were nausea, dizziness and somnolence, none of which occurred at a rate greater than placebo or greater than 3%. There was one serious adverse event in the AXS-07 arm which was deemed by the investigator not to be related to study drug.

"The results of MOMENTUM demonstrate the ability of AXS-07 to provide unique benefits to migraine patients, with fast, strong, and durable relief of migraine pain as compared to a potent active comparator in a stringently designed trial enriched with patients with difficult-to-treat migraine," said Herriot Tabuteau, MD, Chief Executive Officer of Axsome. "These data have potentially important implications for patient care based on the high rate of inadequate response to and patient dissatisfaction with current treatments. With these positive results, we look forward to filing an NDA for AXS-07 in the acute treatment of migraine in 2020."

The MOMENTUM study was conducted pursuant to an SPA with the FDA. The SPA provides agreement that the overall MOMENTUM trial design (e.g., entry criteria, dose selection, endpoints) and planned analysis adequately address objectives that, if met, will support the regulatory submission for approval of AXS-07 for the indication of acute treatment of migraine in adults with or without aura. Based on FDA feedback, Axsome believes that MOMENTUM will be the only efficacy trial required to support an NDA filing for AXS-07 for the acute treatment of migraine. Axsome plans to file the NDA in the second half of 2020.

"The World Health Organization categorizes the disability from severe migraine attacks on the same level as that from quadriplegia, dementia, and acute psychosis. The debilitating pain of migraine damages family life, social life and employment," said Cedric O'Gorman, MD, Senior Vice President of Clinical Development and Medical Affairs of Axsome. "AXS-07 incorporates multiple mechanisms of action to address various migraine processes with the goal of providing enhanced effectiveness. The results of the MOMENTUM trial validate this approach, demonstrating that AXS-07 can provide significant benefit that is greater than that of currently available treatment, even in patients with difficult-to-treat migraine."

AXS-07 is a novel, oral, rapidly absorbed, multi-mechanistic investigational medicine for the acute treatment of migraine, consisting of MoSEIC™ meloxicam and rizatriptan. AXS-07 is thought to act by inhibiting CGRP release, reversing CGRP-mediated vasodilation, and inhibiting neuro-inflammation, pain signal transmission, and central sensitization. Axsome's MoSEIC™ technology significantly increases the speed of absorption of the meloxicam component after oral administration while maintaining a long plasma half-life. AXS-07 is covered by 21 issued U.S. and international patents providing protection out to 2036, and Axsome maintains worldwide rights.

Detailed study results, including additional secondary endpoints, will be submitted for presentation at upcoming medical meetings and for publication. AXS-07 is also being evaluated in the INTERCEPT Phase 3 trial which is a randomized, double-blind, placebo-controlled study evaluating the early treatment of migraine with AXS-07. In contrast to the ongoing MOMENTUM trial in which patients with a history of inadequate response treated migraine attacks once they have become of moderate or severe intensity, in the INTERCEPT trial, patients are to administer AXS-07 at the earliest sign of migraine pain.

Summary of Topline Results of the MOMENTUM Trial

Patient Population

- All enrolled patients had a history of inadequate response to prior acute migraine treatments, assessed using the Migraine Treatment Optimization Questionnaire (mTOQ-4), with an average score of 3.6, corresponding to poor response to prior acute treatments.
- Enrolled patients exhibited a high rate of characteristics that are strongly associated with poor treatment outcomes including [2-4]: presence of cutaneous allodynia (pain from normally non-painful stimuli such as brushing hair, wearing glasses, taking a shower) in 75.4%, severe migraine pain intensity in 41.2%, obesity in 43.7%, and morning migraine in 36.6%.

Regulatory Endpoints

- AXS-07 demonstrated a greater percentage of patients as compared to placebo achieving pain freedom (19.9% versus 6.7%, $p<0.001$) and absence of most bothersome symptom (36.9% versus 24.4%, $p=0.002$), 2 hours after dosing, the two regulatory co-primary endpoints.
- AXS-07 demonstrated superiority to rizatriptan and MoSEIC™ meloxicam on the percentage of patients achieving sustained pain freedom from 2 to 24 hours after dosing (16.1%, 11.2%, and 8.8%, respectively; $p=0.038$, $p=0.001$, respectively versus AXS-07), the pre-specified key secondary endpoint to demonstrate component contribution.

Relief of Migraine Pain and Rescue Medication Use

- Sustained pain relief from 2 to 24 hours after dosing was experienced by 53.3% of patients treated with AXS-07, compared to 33.5% with placebo and 43.9% with rizatriptan ($p<0.001$, $p=0.006$, respectively versus AXS-07).
- Sustained pain relief from 2 to 48 hours after dosing was experienced by 46.5% of patients treated with AXS-07, compared to 31.1% with placebo and 36.5% with rizatriptan ($p<0.001$, $p=0.003$, respectively versus AXS-07).
- Rescue medication was used by 23.0% of AXS-07 patients, compared to 43.5% of placebo and 34.7% of rizatriptan patients ($p<0.001$ for each group versus AXS-07).

Effects of AXS-07 versus Rizatriptan

- AXS-07 rapidly relieved migraine pain with the percentage of patients achieving pain relief with AXS-07 being numerically greater than with rizatriptan at every time point measured starting at 15 minutes, and statistically significantly greater than with rizatriptan by 60 minutes ($p=0.04$).
- AXS-07 was statistically superior to rizatriptan on sustained pain relief from 2 to 24 hours ($p=0.006$) and from 2 to 48 hours ($p=0.003$).
- AXS-07 resulted in significantly less rescue medication use than rizatriptan ($p<0.001$).
- AXS-07 was superior to rizatriptan on the Patient Global Impression of Change (PGI-C) scale ($p=0.022$) and return to normal functioning at 24 hours ($p=0.027$).

Safety and Tolerability

- AXS-07 was safe and well tolerated in the trial.

- The most commonly reported adverse events with AXS-07 were nausea, dizziness and somnolence, none of which occurred at a rate greater than placebo or greater than 3%. There was one serious adverse event in the AXS-07 arm which was deemed by the investigator not to be related to study drug.

Conference Call Information

Axsome will host a conference call and webcast with slides today at 8:00 AM Eastern to discuss the topline results of the MOMENTUM trial of AXS-07 in the acute treatment of migraine. To participate in the live conference call, please dial (844) 698-4029 (toll-free domestic) or (647) 253-8660 (international), and use the passcode 3483715. 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 the MOMENTUM Trial

MOMENTUM (Maximizing Outcomes in Treating Acute Migraine) was a Phase 3, randomized, double-blind, multicenter, controlled trial to assess the efficacy and safety of AXS-07 in the acute treatment of moderate and severe migraine. Eligible patients must have had a history of inadequate response to prior acute migraine treatments, assessed using the Migraine Treatment Optimization Questionnaire (mTOQ-4). A total of 1,594 patients were randomized in a 2:2:2:1 ratio to treatment with AXS-07, rizatriptan, MoSEIC™ meloxicam, or placebo. The two co-primary endpoints of the trial were the proportion of patients who are free from headache pain two hours after dosing, and the proportion of patients who no longer suffered from their most bothersome migraine-associated symptom (nausea, photophobia, or phonophobia) two hours after dosing, for AXS-07 as compared to placebo. Superiority of AXS-07 to the rizatriptan and MoSEIC™ meloxicam arms (component contribution) was to be established based on sustained freedom from headache pain from two to 24 hours after dosing (key secondary endpoint). The MOMENTUM study was conducted pursuant to an FDA Special Protocol Assessment (SPA).

About Migraine

Over 37 million Americans suffer from migraine according to the Centers for Disease Control, and it is the leading cause of disability among neurological disorders in the United States according to the American Migraine Foundation. Migraine is characterized by recurrent attacks of pulsating, often severe and disabling head pain associated with nausea, and sensitivity to light and or sound. It is estimated that migraine accounts for \$78 billion in direct (e.g. doctor visits, medications) and indirect (e.g. missed work, lost productivity) costs each year in the United States [5]. Published surveys of migraine sufferers indicate that more than 70% are not fully satisfied with their current treatment, that nearly 80% would try a new therapy, and that they desire treatments that work faster, more consistently, and result in less symptom recurrence [6,7].

About AXS-07

AXS-07 is a novel, oral, investigational medicine with distinct dual mechanisms of action under development for the acute treatment of migraine. AXS-07 consists of MoSEIC™ meloxicam and rizatriptan. Meloxicam is a new molecular entity for migraine enabled by Axsome's MoSEIC (Molecular Solubility Enhanced Inclusion Complex) technology, which results in rapid absorption of meloxicam while maintaining a long plasma half-life. Meloxicam is a COX-2 preferential non-steroidal anti-inflammatory drug and rizatriptan is a 5-HT_{1B/1D} agonist. AXS-07 is designed to provide rapid, enhanced and consistent relief of migraine, with reduced symptom recurrence. AXS-07 is 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 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), and is being developed for major depressive disorder (MDD). AXS-05 is also being developed for smoking cessation treatment. AXS-07 is currently in two Phase 3 trials for the acute treatment of migraine. AXS-12 is being developed for the treatment of narcolepsy. AXS-05, AXS-07, AXS-09, and AXS-12 are investigational drug products not approved by the FDA. For more information, please visit the

References

1. Ferrari MD, Roon KI, Lipton RB, Goadsby PJ. Oral triptans (serotonin 5-HT(1B/1D) agonists) in acute migraine treatment: a meta-analysis of 53 trials. *Lancet*. 2001 Nov 17;358(9294):1668-75.
2. Lipton RB, Fanning KM, Serrano D, Reed ML, Cady R, Buse DC. Ineffective acute treatment of episodic migraine is associated with new-onset chronic migraine. *Neurology*. 2015 Feb 17;84(7):688-95.
3. Lipton RB, Munjal S, Buse DC, Bennett A, Fanning KM, Burstein R, Reed ML. Allodynia Is Associated With Initial and Sustained Response to Acute Migraine Treatment: Results from the American Migraine Prevalence and Prevention Study. *Headache*. 2017 Jul;57(7):1026-1040.
4. Lipton RB, Munjal S, Buse DC, Fanning KM, Bennett A, Reed ML. Predicting Inadequate Response to Acute Migraine Medication: Results from the American Migraine Prevalence and Prevention (AMPP) Study. *Headache*. 2016 Nov;56(10):1635-1648.
5. Gooch CL, Pracht E, Borenstein AR. The burden of neurological disease in the United States: A summary report and call to action. *Ann Neurol*. 2017 Apr; 81(4):479-484.
6. Smelt AF, Louter MA, Kies DA, Blom JW, Terwindt GM, van der Heijden GJ, De Gucht V, Ferrari MD, Assendelft WJ. What do patients consider to be the most important outcomes for effectiveness studies on migraine treatment? Results of a Delphi study. *PLoS One*. 2014 Jun 16;9(6):e98933.
7. Lipton RB, Stewart WF. Acute migraine therapy: do doctors understand what patients with migraine want from therapy? *Headache*. 1999;39(suppl 2):S20-S26.

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, pace of enrollment and completion of the trials (including our ability to fully fund our disclosed clinical trials, which assumes no material changes to our currently projected expenses), futility analyses and receipt of interim results, which are not necessarily indicative of the final results of our ongoing clinical trials, and the number or type of studies or nature of results necessary to support the filing of a new drug application ("NDA") for any of our current product candidates; our ability to fund additional clinical trials to continue the advancement of our product candidates; the timing of and our ability to obtain and maintain U.S. Food and Drug Administration ("FDA") or other regulatory authority approval of, or other action with respect to, our product candidates (including, but not limited to, FDA's agreement with the Company's plan to discontinue the bupropion treatment arm of the ADVANCE-1 study in accordance with the independent data monitoring committee's recommendations); the potential for the MOMENTUM clinical trial to provide a basis for approval of AXS-07 for the acute treatment of migraine in adults with or without aura, pursuant to our special protocol assessment; the potential for the ASCEND clinical trial, combined with the GEMINI clinical trial results, to provide a basis for approval of AXS-05 for the treatment of major depressive disorder and accelerate its development timeline and commercial path to patients; 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; the Company's anticipated capital requirements, including the Company's anticipated cash runway; 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. The data disclosed in this press release are considered topline data and subject to further statistical review and the final results may vary.

Axsome Contact:

Mark Jacobson
Senior Vice President, Operations
Axsome Therapeutics, Inc.
200 Broadway, 3rd Floor
New York, NY 10038
Tel: 212-332-3243
Email: mjacobson@axsome.com
www.axsome.com

 NASDAQ: AXSM

AXSOME

THERAPEUTICS

MOMENTUM Phase 3 Trial of AXS-07 in Migraine Topline
Results

Conference Call

December 30, 2019

© Axsome Therapeutics, Inc.

AXS-07 in Migraine Acute Treatment

MOMENTUM Phase 3 Trial Topline Results

Introduction	Mark Jacobson , Senior Vice President, Operations
Overview and Summary	Herriot Tabuteau, MD , Chief Executive Officer
MOMENTUM Trial Design & Results	Cedric O’Gorman, MD , Senior Vice President, Clinical Development & Medical Affairs
Q&A	Presenters, Nick Pizzie , Chief Financial Officer and Dave Marek , Chief Commercial Officer
Concluding Remarks	Herriot Tabuteau, MD , Chief Executive Officer

Forward-Looking Statements & Safe Harbor

Certain information contained in this presentation may include "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. 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, pace of enrollment and completion of the trials (including our ability to fully fund our disclosed clinical trials, which assumes no material changes to our currently projected expenses), futility analyses and receipt of interim results, which are not necessarily indicative of the final results of our ongoing clinical trials and the number or type of studies or nature of results necessary to support the filing of a new drug application for any of our current product candidates; our ability to fund additional clinical trials to continue the advancement of our product candidates; the timing of and our ability to obtain and maintain U.S. Food and Drug Administration ("FDA") or other regulatory authority approval of, or other action with respect to, our product candidates (including, but not limited to, FDA's agreement with the Company's plan to discontinue the bupropion treatment arm of the ADVANCE-1 study in accordance with the independent data monitoring committee's recommendations); the Company's ability to obtain additional capital necessary to fund its operations; the Company's ability to generate revenues in the future; the potential for the MOMENTUM clinical trial to provide a basis for approval of AXS-07 for the acute treatment of migraine in adults with or without aura, pursuant to our special protocol assessment; the potential for the ASCEND clinical trial, combined with the GEMINI clinical trial results, to provide a basis for approval of AXS-05 for the treatment of major depressive disorder and accelerate its development timeline and commercial path to patients; 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 enforceability of the Company's license agreements; the acceptance by the market of the Company's product candidates, if approved; the Company's anticipated capital requirements, including the Company's anticipated cash runway; and other factors, including general economic conditions and regulatory developments, not within the Company's control. These factors could cause actual results and developments to be materially different from those expressed in or implied by such statements. Forward-looking statements are not guarantees of future performance, and actual results may differ materially from those projected. The forward-looking statements are made only as of the date of this presentation and the Company undertakes no obligation to publicly update such forward-looking statements to reflect subsequent events or circumstance.

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. Neither we nor any other person makes any representation as to the accuracy or completeness of such data or undertakes any obligation to update such data after the date of this presentation. In addition, these projections, assumptions and estimates are necessarily subject to a high degree of uncertainty and risk. The data disclosed in this presentation are considered topline data and subject to further statistical review and the final results may vary.



Overview and Summary

Herriot Tabuteau, MD

AXSOME THERAPEUTICS

CHIEF EXECUTIVE OFFICER
AXSOME THERAPEUTICS, INC.

AXSOME THERAPEUTICS

© Axsome Therapeutics, Inc.

4

AXS-07 MOMENTUM Phase 3 Trial: Summary of Topline Results

- AXS-07 is a novel, oral, multi-mechanistic investigational medicine for the acute treatment of migraine
- MOMENTUM enrolled only patients with a history of inadequate response to prior acute treatments and incorporated rizatriptan as an active comparator:
 - Rizatriptan is considered the fastest acting triptan, and one of the most effective migraine treatments
- AXS-07 met both co-primary endpoints, and key secondary endpoint (component contribution)
- AXS-07 provided substantially greater and more sustained migraine pain relief compared to rizatriptan and placebo
- Rapidly relieved migraine pain
- Significantly reduced use of rescue medication compared to rizatriptan
- AXS-07 was safe and well tolerated
- Positive MOMENTUM trial supports NDA filing of AXS-07 in the acute treatment of migraine, anticipated in 2020

Migraine: Disabling Disease in Need of New Treatments

- The World Health Organization classifies severe migraine attacks as among the most disabling illnesses, comparable to dementia, quadriplegia and active psychosis^{1,2}
- Debilitating pain, and the often-constant fear of the next migraine attack, damage family life, social life and employment³
- Depression and anxiety are twice as common in people with migraine than in healthy individuals⁴
- Widespread misperception of the seriousness of migraine contributes to its under-recognition and under-treatment³
- The majority of patients are not fully satisfied with their current treatment⁵

There is an urgent need for new treatments that provide improved efficacy for this serious neurological disease

¹Menken et al. *Arch Neurol*. 2000;57:418-420.

²Shapiro and Goadsby. *Cephalalgia*. 2007;27:991-4.

³Global Burden of Disease Study. *Lancet*. 2017;390:1211-1259

⁴Antonaci et al. *J Headache Pain*. 2011;12:115-125.

⁵Lipton and Stewart. *Headache*. 1999;39(suppl 2):S20-S26.

AXS-07 (MoSEIC™ Meloxicam/Rizatriptan)

Multi-Mechanistic Treatment for Migraine

AXS-07		
Migraine Process	Mechanism / Action	Component
CGRP Mediated	<ul style="list-style-type: none"> ✓ Inhibition of CGRP release ✓ Reversal of CGRP-mediated vasodilation 	Rizatriptan
Neuroinflammation	<ul style="list-style-type: none"> ✓ Cyclooxygenase inhibition ✓ PGE₂ synthesis inhibition 	MoSEIC™ meloxicam
Pain Signal Transmission	<ul style="list-style-type: none"> ✓ Decrease passage of pain signals to trigeminal nucleus caudalis 	Rizatriptan
Central Sensitization	<ul style="list-style-type: none"> ✓ Reversal of central sensitization 	MoSEIC™ meloxicam

Mechanisms of AXS-07 address multiple disordered physiological processes observed during migraine attacks



MOMENTUM Phase 3 Trial Design & Results

Cedric O’Gorman MD, MBA

AXSOME THERAPEUTICS

SENIOR VICE PRESIDENT, CLINICAL DEVELOPMENT
AND MEDICAL AFFAIRS
AXSOME THERAPEUTICS, INC.

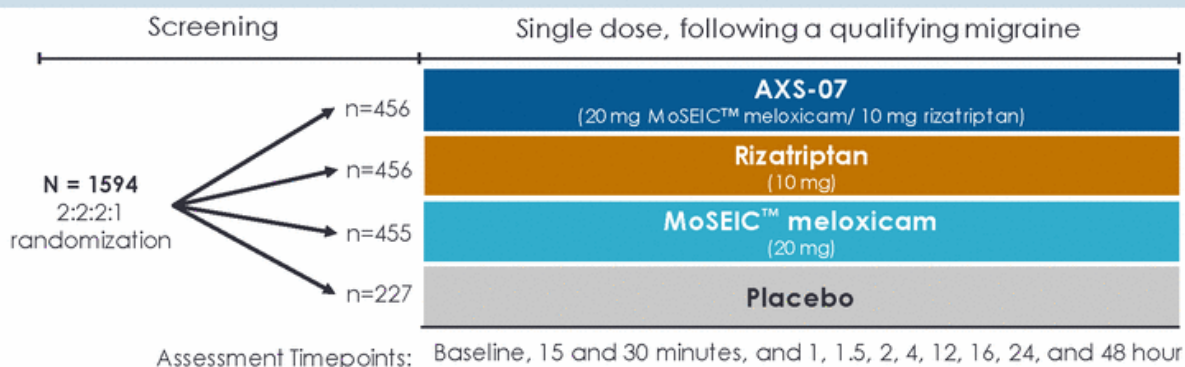
AXSOME THERAPEUTICS

© Axsome Therapeutics, Inc.

8

MOMENTUM Phase 3 Trial: Design Summary

MOMENTUM: Maximizing Outcomes in Treating acute Migraine
Phase 3 study of AXS-07 for the acute treatment of migraine in adults with history of inadequate response to prior treatment



- **Co-Primary Endpoints (AXS-07 vs placebo)**
 - Pain Freedom at 2 hours
 - Freedom from MBS at 2 hours
- **Key Secondary Endpoint (AXS-07 vs rizatriptan and MoSEIC™ meloxicam)**
 - Superiority of AXS-07 to individual components (component contribution) based on sustained pain freedom 2-24 hours after dosing

MOMENTUM Phase 3 Trial: Key Entry Criteria

Inclusion Criteria

- Male or female, 18 to 65 years of age, inclusive
- Established diagnosis (at least 1 year) of migraine with or without aura as defined by the ICHD-3 criteria
- An average 2 to 8 moderate to severe migraines per month, on average
- History of inadequate response as assessed by a score of ≤ 7 on the mTOQ-4

Exclusion Criteria

- Cluster headaches or other types of migraines
- Chronic daily headache (≥ 15 non-migraine headache days per month)
- History of significant cardiovascular disease
- Uncontrolled hypertension

Abbreviations: ICHD-3 = International Classification of Headache Disorder, 3rd Edition; mTOQ-4 = Migraine Treatment Optimization Questionnaire.

MOMENTUM Baseline Characteristics:

Difficult-to-Treat Migraine Characteristics

	AXS-07 (20 mg MoSEIC Mlx / 10 mg Riz)	Rizatriptan (10 mg)	MoSEIC Meloxicam (20 mg)	Placebo
	n=428	n=419	n=421	n=209
Total mTOQ-4 Score, mean (SD)	3.5 (2.17)	3.6 (2.25)	3.8 (2.14)	3.6 (2.19)
Presence of Allodynia, n (%)	336 (78.5%)	305 (72.8%)	322 (76.5%)	150 (71.8%)
Severe Pain Intensity, n (%)	184 (43.0%)	155 (37.0%)	181 (43.0%)	88 (42.1%)
Obese (>30mg/kg²), n (%)	184 (43.0%)	197 (47.0%)	174 (41.3%)	90 (43.1%)
Morning Migraine, n (%)	162 (36.7%)	158 (36.4%)	159 (36.7%)	76 (34.9%)

Abbreviations: Mlx = meloxicam; mTOQ-4 = Migraine Treatment Optimization Questionnaire; Riz = rizatriptan

MOMENTUM Baseline Characteristics: Demographics

	AXS-07 (20 mg MoSEIC Mlx / 10 mg Riz)	Rizatriptan (10 mg)	MoSEIC Meloxicam (20 mg)	Placebo
	n=428	n=419	n=421	n=209
Age, years	41.2 (11.52)	41.4 (10.68)	41.0 (12.07)	40.8 (11.47)
Female gender, n (%)	346 (80.8%)	353 (84.2%)	355 (84.3%)	177 (84.7%)
Race, n (%)				
White	337 (78.7%)	320 (76.4%)	324 (77.0%)	154 (73.7%)
Black or African American	73 (17.1%)	83 (19.8%)	86 (20.4%)	47 (22.5%)
Asian	10 (2.3%)	6 (1.4%)	9 (2.1%)	5 (2.4%)
Other or Not Reported	4 (0.9%)	5 (1.2%)	0 (0%)	2 (1.0%)
BMI (mg/kg ²)	29.2 (5.67)	29.7 (5.67)	28.9 (5.69)	29.3 (5.63)
Prior triptan use, n (%)	171 (40.0%)	163 (38.9%)	147 (34.9%)	73 (34.9%)

Data are mean (SD) unless otherwise stated.

Abbreviations: BMI = Body Mass Index; Mlx = meloxicam; Riz = rizatriptan

Co-Primary Endpoints: Pain and MBS Improvement

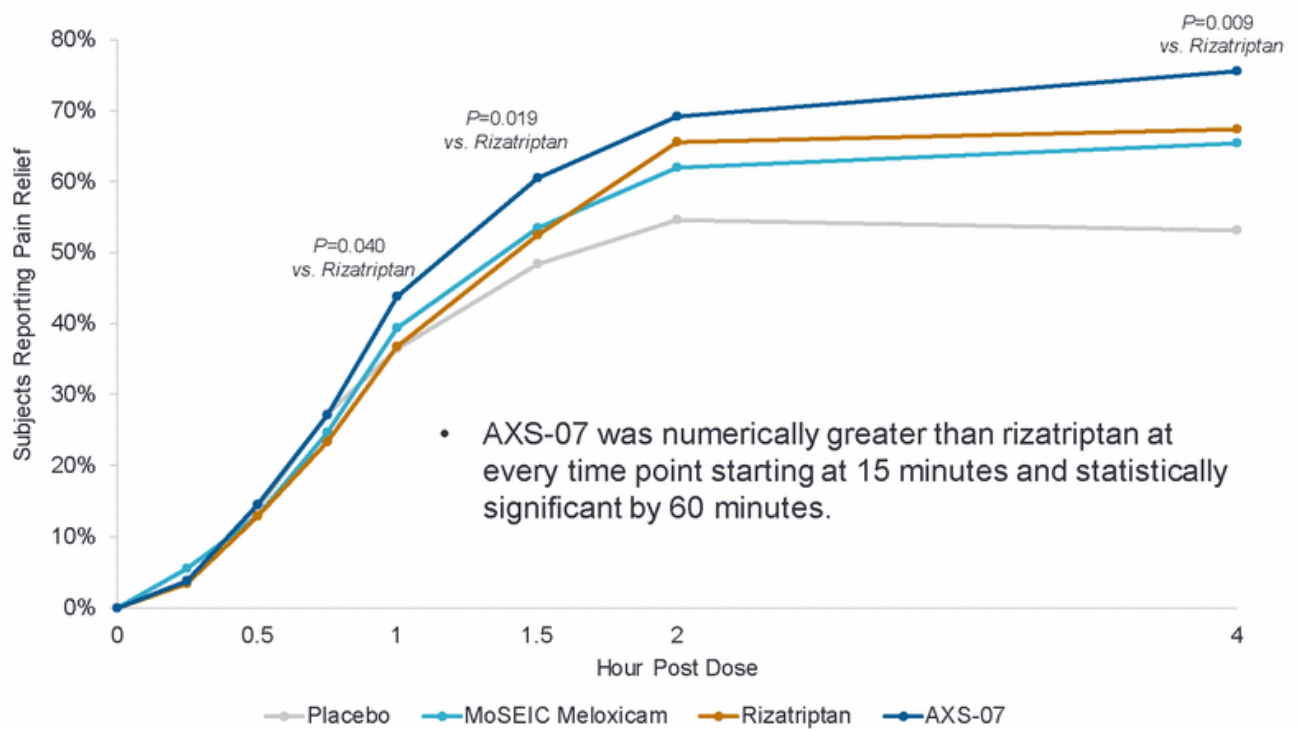
Endpoints	AXS-07 (n=428)	Placebo (n=209)	Difference	P-Value
Co-Primary Endpoint 1: <i>Pain Freedom 2 Hours after Dose, %</i>	19.9%	6.7%	-13.2%	<0.001
Co-Primary Endpoint 2: <i>Absence of Most Bothersome Symptom 2 Hours after Dose, %</i>	36.9%	24.4%	-12.5%	0.002

Most Bothersome Symptom = nausea, photophobia, or phonophobia

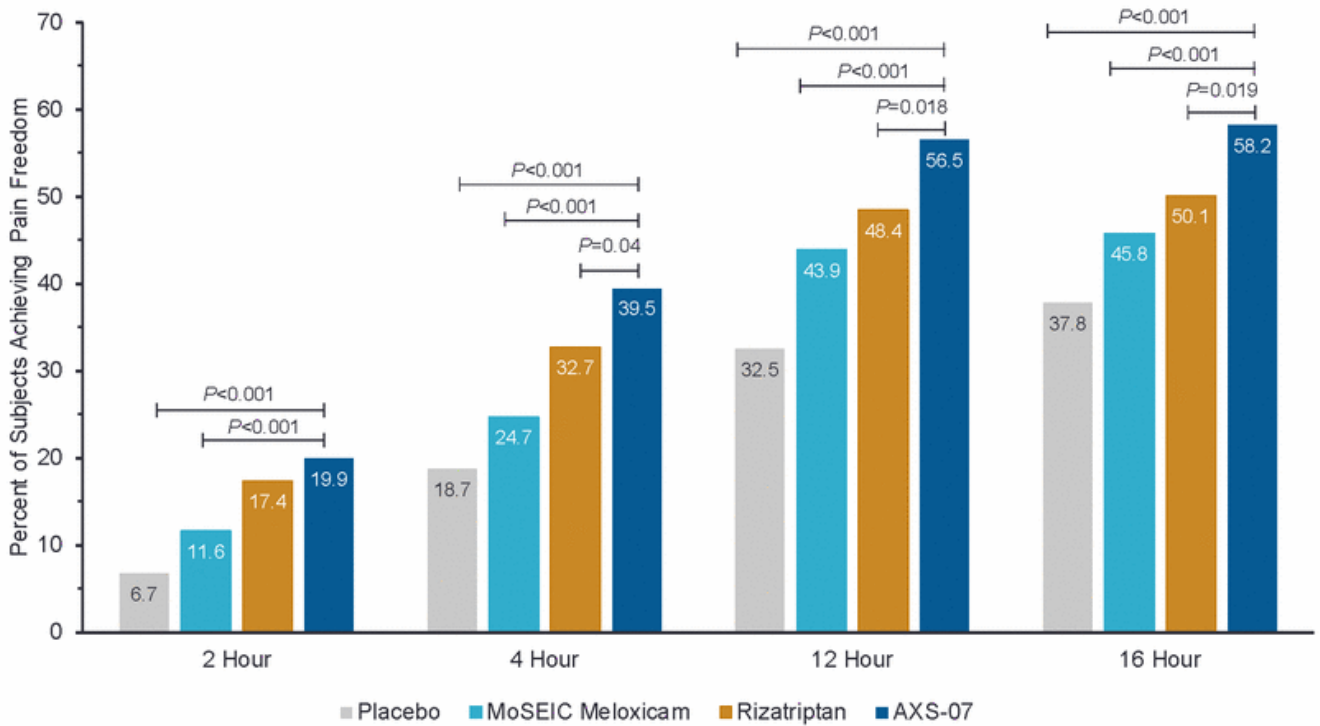
Key Secondary Endpoint: 2-24 Hour Sustained Pain Freedom

	AXS-07 (n=428)	Rizatriptan (n=419)	MoSEIC Meloxicam (n=421)	Placebo (n=209)
Sustained Pain Freedom, <i>Pain Freedom maintained from 2 to 24 Hours after Dose, %</i>	16.1%	11.2%	8.8%	5.3%
Difference from AXS-07		-4.9%	-7.3%	-10.9%
<i>P</i> -value vs. AXS-07		0.038	0.001	<0.001

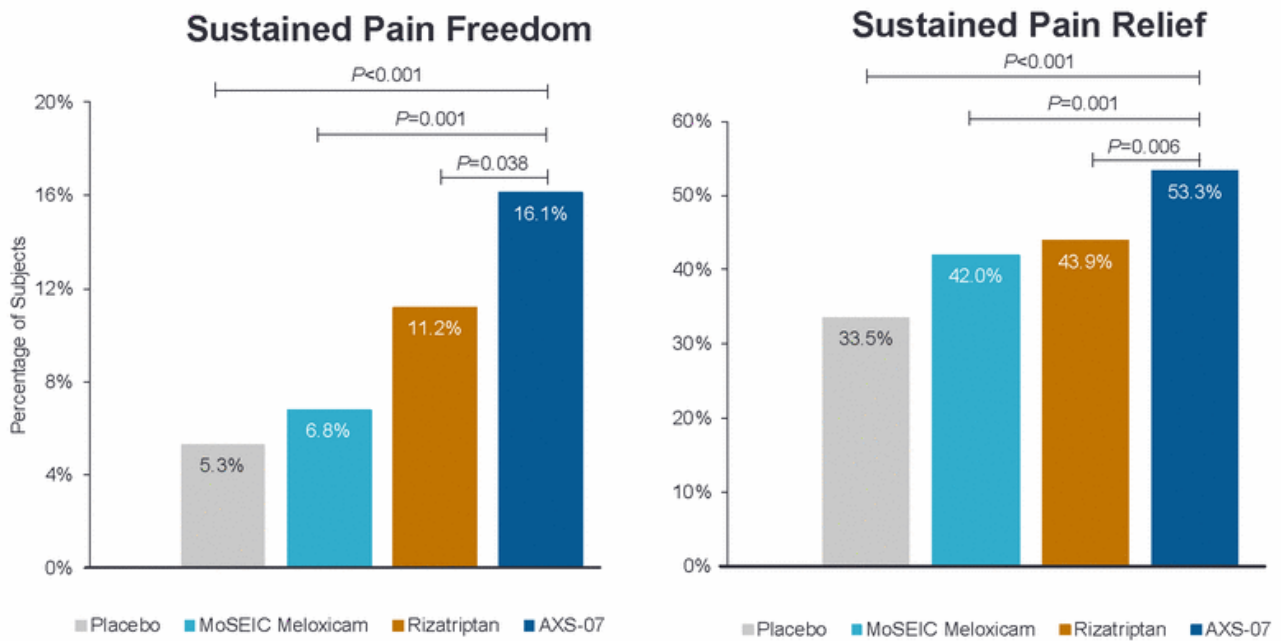
Rapid Relief of Migraine Pain



Pain Freedom Rates Over Time: Significant Improvements in Pain Freedom

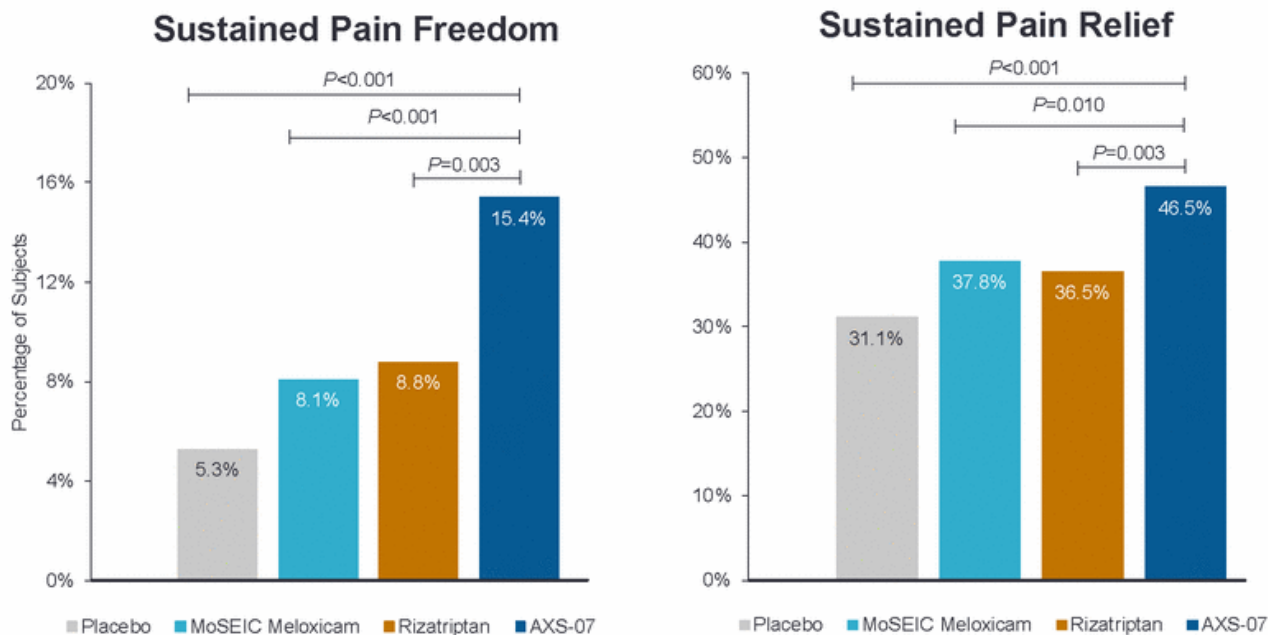


Sustained Effect from 2 to 24 hours: AXS-07 Superiority to Rizatriptan



- 80% of subjects treated with AXS-07 who achieved pain freedom at Hour 2 maintained it through Hour 24

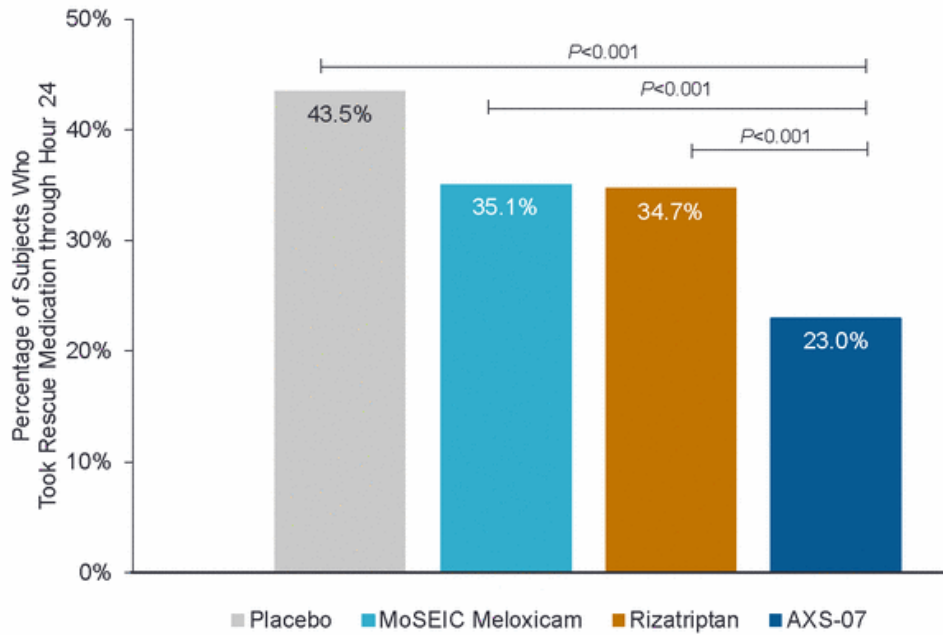
Sustained Effect from 2 to 48 hours: AXS-07 Superiority to Rizatriptan



- 77% of subjects treated with AXS-07 who achieved pain freedom at Hour 2 maintained it through Hour 48

Reduced Use of Rescue Medication: AXS-07 Superiority to Rizatriptan

- 77% of subjects receiving AXS-07 did not require rescue medication



Multiple Efficacy-Related Endpoints: AXS-07 Superiority Over Rizatriptan

Endpoint	<i>P</i> -value AXS-07 vs. Rizatriptan
1 Hour Pain Relief	0.04
2-24 Hour Sustained Pain Relief	0.006
2-48 Hour Sustained Pain Relief	0.003
2-24 Hour Sustained Pain Freedom	0.038
2-48 Hour Sustained Pain Freedom	0.003
PGI-C	0.022
Functional Improvement at 24 hours	0.027
Use of Rescue Medication	<0.001

Abbreviations: PGI-C = Patient Global Impression – Change

Safety of AXS-07:

Adverse Events Occurring in $\geq 2\%$ of Subjects

	AXS-07 (N = 441)	Rizatriptan (N = 434)	Meloxicam (N = 433)	Placebo (N = 218)
Any Treatment-Emergent AE	49 (11.1%)	67 (15.4%)	50 (11.5%)	13 (6.0%)
Nausea	12 (2.7%)	21 (4.8%)	14 (3.2%)	8 (3.7%)
Dizziness	7 (1.6%)	9 (2.1%)	5 (1.2%)	5 (1.2%)
Somnolence	6 (1.4%)	9 (2.1%)	10 (2.3%)	6 (1.4%)

Data presented as number of subjects (% of subjects)

- One serious adverse event in the AXS-07 arm which was not treatment related

MOMENTUM Phase 3 Trial Results: Summary

- AXS-07 resulted in rapid, sustained, substantial and statistically significant efficacy as compared to placebo and rizatriptan in the acute treatment of migraine in patients with a history of inadequate response to prior acute treatments.
- The efficacy benefits of AXS-07 translated into significantly less use of rescue medication with AXS-07 as compared to rizatriptan and placebo.
- AXS-07 was safe and well tolerated in this study



Q&A

Concluding Remarks

Herriot Tabuteau, MD

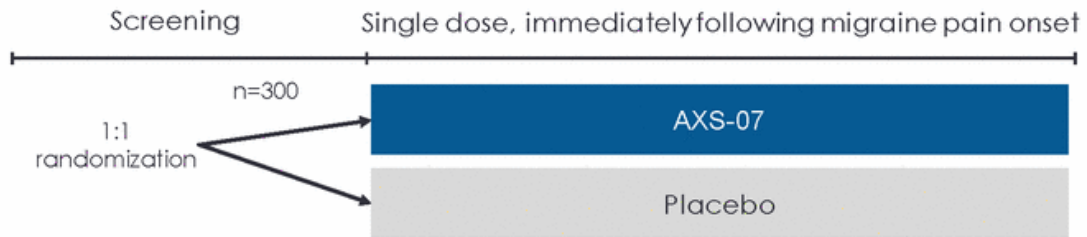
CHIEF EXECUTIVE OFFICER
AXSOME THERAPEUTICS, INC.

INTERCEPT Study of AXS-07

For the Acute Treatment of Migraine



INTERCEPT: INItiating EaRly Control of MigrainE Pain & Associated SympToms
Phase 3 trial of AXS-07 for the acute treatment of migraine



Patient Population

- Adult subjects with an established diagnosis of migraine with or without aura
- Will initiate treatment at the first sign of migraine pain onset

Co-Primary Endpoints (AXS-07 vs placebo)

- Pain Freedom at 2 hours
- Freedom from MBS at 2 hours

✓ On track to report
topline results: Q1'20

Abbreviations: MBS, most bothersome migraine-associated symptom.

AXSOME THERAPEUTICS

© Axsome Therapeutics, Inc.

25

Our CNS Candidates and Pipeline

- Four differentiated clinical-stage CNS assets targeting significant and growing markets
- Patent protection to 2034-2036, worldwide rights

Product Candidate	Preclinical	Phase 1	Phase 2	Phase 3
AXS-05 (DM + BUP)	Treatment Resistant Depression: Fast Track Designation			Ongoing
	Major Depressive Disorder: Breakthrough Therapy Designation			
	Agitation in Alzheimer's Disease: Fast Track Designation			Ongoing
	Smoking Cessation			
AXS-07 (MoSEIC™ Mx + Riz)	Migraine: Special Protocol Assessment			
AXS-12 (Reboxetine)	Narcolepsy; U.S. Orphan Designation			Phase 3 planned
AXS-09 (DM + S-BUP)	CNS Disorders			

Abbreviations: BUP = Bupropion; CNS = Central Nervous System; DM = Dextromethorphan; Mx = Meloxicam; Riz = Rizatriptan; S-BUP = Esbupropion.

AXSOME

THERAPEUTICS

Thank you.

For more information, please contact

Mark Jacobson
SVP, Operations

212-332-3243
mjacobson@Axsome.com

axsome.com
