Pimavanserin as Potential Treatment for Negative Symptoms of Schizophrenia

ADVANCE Study Positive Top-line Results

NOVEMBER 25, 2019

ACADIA® Pharmaceuticals

Agenda

INTRODUCTION	Mark Johnson | Vice President, Investor Relations
CEO OPENING REMARKS	Steve Davis | Chief Executive Officer
ADVANCE STUDY RESULTS	Serge Stankovic, M.D., M.S.P.H. | President
CEO CLOSING REMARKS	Steve Davis | Chief Executive Officer
Q&A	Michael Yang | Chief Commercial Officer, available for Q&A Elena Ridloff | Chief Financial Officer, available for Q&A

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Forward-Looking Statement

This presentation contains forward-looking statements. These statements relate to future events and involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed in or implied by such forward-looking statements. Each of these statements is based only on current information, assumptions and expectations that are inherently subject to change and involve a number of risks and uncertainties. Forward-looking statements include, but are not limited to, statements related to: the potential benefits of pimavanserin as a treatment for the negative symptoms of schizophrenia or other central nervous system disorders as well as the potential results of clinical trials of pimavanserin in other indications.

In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “could,” “would,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “projects,” “predicts,” “potential” and similar expressions (including the negative thereof) intended to identify forward-looking statements. Given the risks and uncertainties, you should not place undue reliance on these forward-looking statements. For a discussion of the risks and other factors that may cause our actual results, performance or achievements to differ, please refer to our annual report on Form 10-K for the year ended December 31, 2018 as well as our subsequent filings with the SEC. The forward-looking statements contained herein are made as of the date hereof, and we undertake no obligation to update them for future events.

Pimavanserin (NUPLAZID®) is only approved in the U.S by the FDA for the treatment of hallucinations and delusions associated with Parkinson’s disease psychosis.
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CEO Opening Remarks

Steve Davis
CEO

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Schizophrenia Negative Symptoms

HIGH UNMET NEED

No FDA-approved treatment for negative symptoms of schizophrenia

~40 - 50% of schizophrenia patients experience predominant negative symptoms[1]

Potential U.S. Addressable Population:
>1M patients diagnosed[1]

Negative symptoms include apathy, lack of emotion, social withdrawal, restricted speech, and blunted affect and can lead to:

- Low social functioning
- Long-term disability
- Significant caregiver burden

[1]Studies suggest that ~40-50% of schizophrenia patients experience predominant negative symptoms; Patel et al. 2015, Haro et al., 2015, Bobes et al. 2010, and Chue and Lalonde, 2014.

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Summary of Top-line ADVANCE Results

The study achieved statistical significance on the primary endpoint:

- Improvement in Negative Symptom Assessment-16 (NSA-16) total score compared to placebo at 26 weeks ***(p-value = 0.043, effect size = 0.21*)**

- Greater improvement on NSA-16 was observed in the ~54% of patients on the higher 34 mg dose (n=107) compared to placebo **(*unadjusted p-value = 0.0065, effect size = 0.34)***

Pimavanserin was well-tolerated with low rates of adverse events, serious adverse events, and discontinuations due to adverse events:

- Overall adverse event profile was similar to placebo
- No effect on vital signs, weight, metabolic syndrome or extrapyramidal symptoms compared to placebo

Plan to initiate a second pivotal study in negative symptoms of schizophrenia with 34 mg dose in 1H20

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ADVANCE Results

Serge Stankovic, M.D., M.S.P.H.
President

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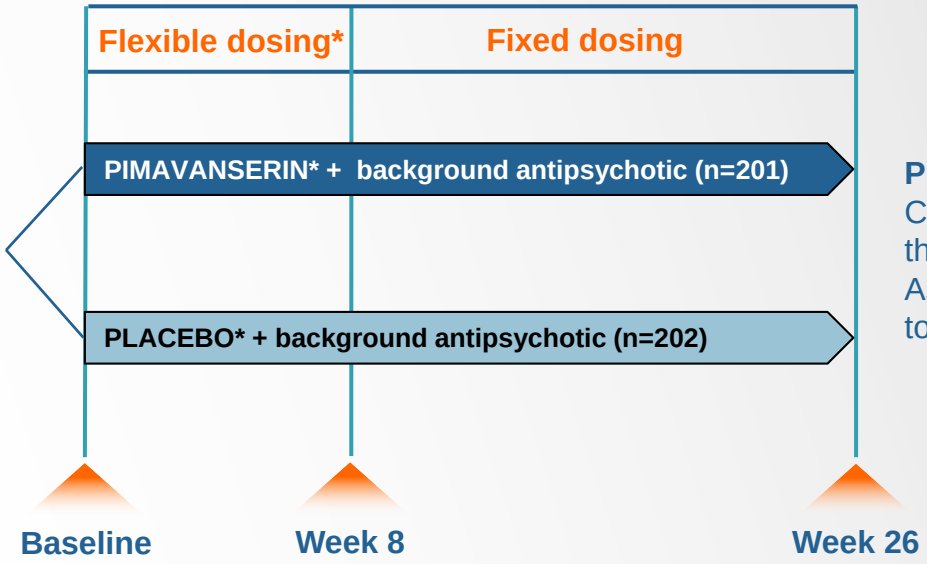
ADVANCE Study Design

26 Week, Randomized, Double-blind,
Placebo-controlled, Multi-center Outpatient Study

403 patients with predominant negative symptoms of schizophrenia



Primary Endpoint:
Change from baseline on the Negative Symptom Assessment-16 (NSA-16) total score

*Starting daily dose of 20 mg at Baseline may be adjusted to 34 mg or 10 mg between weeks 2 and 8

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Baseline Characteristics: Well-Balanced Between Treatment Arms

	Placebo (n=201)	Pimavanserin (n=199)	Total* (n=400)
NSA-16 Total Score	61.0	61.8	61.4
PSP Score	46.7	47.2	46.9
Severity of Schizophrenia Negative Symptoms Categories, n (%)			
CGI-SCH-S** ≤ 4	81 (40.3)	94 (47.2)	175 (43.8)
CGI-SCH-S** ≥ 5	120 (59.7)	105 (52.8)	225 (56.3)
Most Prevalent Background Antipsychotics in the Study:			
Risperidone, including LAI** (%)	33.8%	43.2%	38.5%
Aripiprazole, including LAI** (%)	34.3%	30.7%	32.5%
Olanzapine (%)	30.8%	25.1%	28.0%
Duration of Schizophrenia Negative Symptoms Categories, n (%)			
≤ 5 Years	112 (55.7)	104 (52.3)	216 (54.0)
> 5 Years	89 (44.3)	95 (47.7)	184 (46.0)
Duration of Schizophrenia Categories, n (%)			
≤ 5 Years	51 (25.4)	49 (24.6)	100 (25.0)
> 5 Years	150 (74.6)	150 (75.4)	300 (75.0)
Region, n (%)			
North America	25 (12.4)	24 (12.1)	49 (12.3)
Europe	176 (87.6)	175 (87.9)	351 (87.8)

*Baseline characteristics for full analysis set (Randomized and treated with at least one dose of study drug, and have both a Baseline and at least one post-Baseline NSA-16 total score).
**CGI-SCH-S = Clinical Global Impression-Schizophrenia Severity scale; LAI = long-acting injectable formulations.
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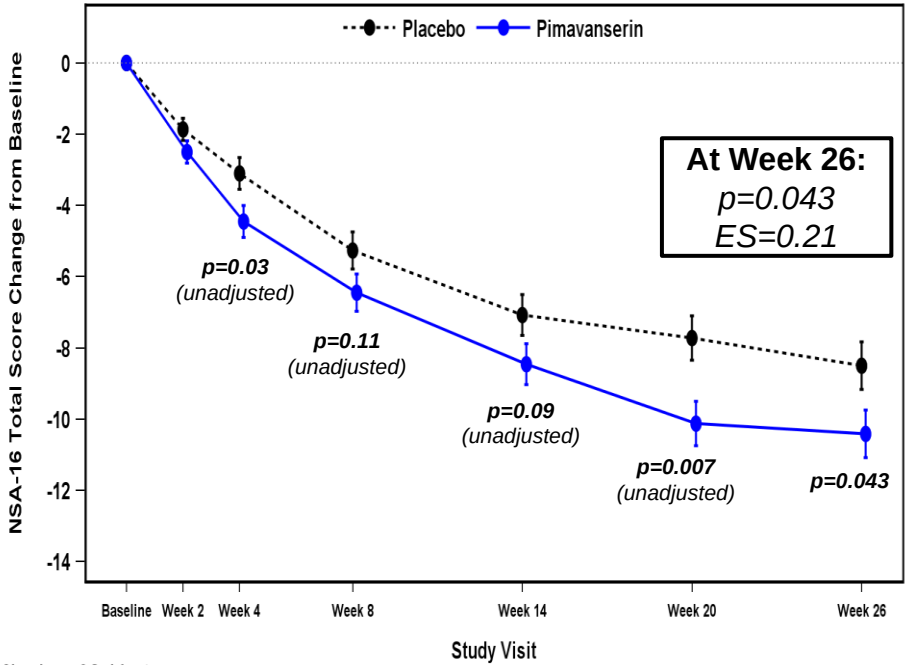
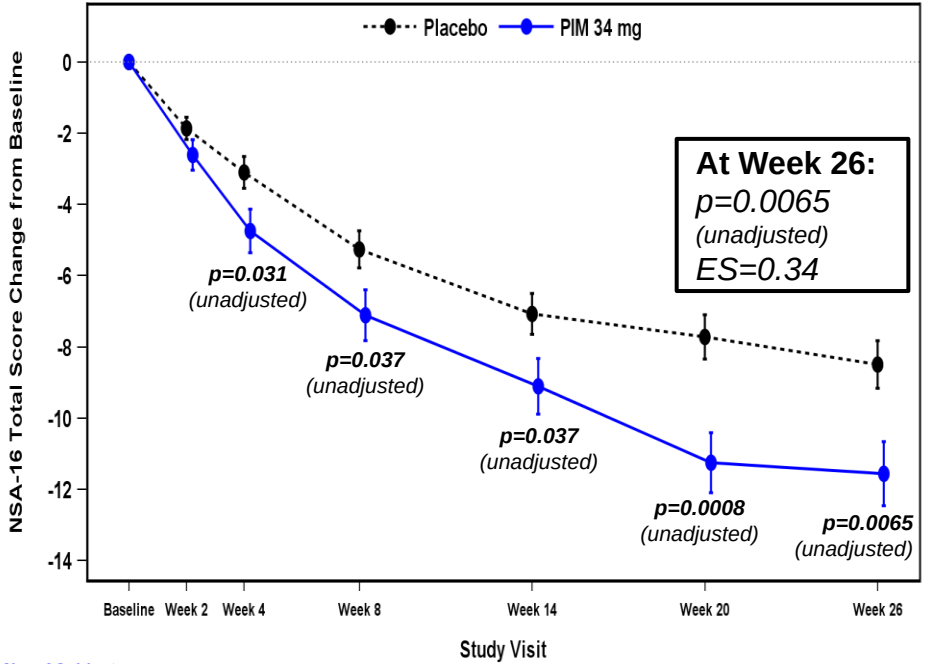
Primary Endpoint: NSA-16 Total Score

Overall Study



Number of Subjects							
Placebo	201	201	197	192	184	179	173
Pimavanserin	199	199	193	191	185	180	174

34 mg Dose*



No. of Subjects							
Placebo	201	201	197	192	184	179	173
PIM 34 mg	107	107	105	103	102	102	99

*Prespecified subgroup with p-values calculated post-hoc.
ADVANCE study included flexible dosing regimen. Both pimavanserin and placebo groups were on a stable background antipsychotic treatment.
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Safety Summary

Safety Analysis Set	Placebo (N=202)	Pimavanserin (N=201)
	Subjects n (%)	Subjects n (%)
Any Treatment-Emergent Adverse Event	71 (35.1)	80 (39.8)
Any Serious Treatment-Emergent Adverse Event	1 (0.5)	4 (2.0)
Any Treatment-Emergent Adverse Event Leading to Discontinuation or Study Termination	6 (3.0)	10 (5.0)
Completed the Study	174 (86.1)	172 (85.6)

No clinically significant differences in vital signs, weight, metabolic syndrome or extrapyramidal symptoms were observed in the pimavanserin group compared to placebo

Both pimavanserin and placebo groups were on a stable background antipsychotic treatment.
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Next Steps for Pimavanserin for the Negative Symptoms of Schizophrenia

Key Learnings from ADVANCE:

- Greater improvement observed on NSA-16:
  - In patients on 34 mg dose
  - In patients with a diagnosis > 5 years
  - In patients from European sites

- Pimavanserin was well-tolerated at all doses tested

Plan to initiate a second pivotal study in negative symptoms of schizophrenia with 34 mg dose in 1H20

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CEO Closing Remarks

Steve Davis
CEO

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Significant Late-Stage Pipeline Opportunities

COMPOUND/ PROGRAM	INDICATION	IND-TRACK	PHASE 1	PHASE 2	PHASE 3	MARKETED
NUPLAZID® (pimavanserin)[1]	Hallucinations and Delusions associated with PD Psychosis					
Pimavanserin	Dementia-Related Psychosis					
Pimavanserin	Major Depressive Disorder *Adjunctive Therapy*					
Trofinetide[2]	Rett Syndrome					
Pimavanserin	Negative Symptoms of Schizophrenia					

[1]NUPLAZID (pimavanserin) is only approved in the U.S by the FDA for the treatment of hallucinations and delusions associated with Parkinson's disease psychosis.
[2]ACADIA has an exclusive license to develop and commercialize trofinetide in North America from Neuren Pharmaceuticals.
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Q&A

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