# ACADIA Corporate Update

July 20, 2020

ACADIA® Pharmaceuticals

# Agenda

| | |
|---|---|
| **INTRODUCTION** | **Mark Johnson** \| Vice President, Investor Relations |
| **CEO OPENING REMARKS** | **Steve Davis** \| Chief Executive Officer |
| **PHASE 3 CLARITY 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<br>**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 hallucinations and delusions associated with dementia-related psychosis, as an adjunctive treatment for major depressive disorder 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, 2019 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.
Provided July 20, 2020 as part of an oral presentation and is qualified by such; contains forward-looking statements; actual results may vary materially; ACADIA disclaims any duty to update.

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# Opening Remarks

Steve Davis
CEO

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# FDA Accepts sNDA for Dementia-Related Psychosis (DRP) for Filing

- ✓ **sNDA Submitted June 3, 2020**
- ✓ **FDA Accepts sNDA for Filing**
  - FDA has not identified any potential review issues at this point in their evaluation
  - FDA is not currently planning to hold an Advisory Committee meeting
  - PDUFA Date: April 3, 2021

*sNDA includes the following:*

| Pivotal Efficacy | Supportive Efficacy | Large Safety Database |
|---|---|---|
| Positive Phase 3 HARMONY Study | Positive Phase 2 (-019) Alzheimer's Disease Psychosis Study[1] & Positive data in PDP (-020) patients with dementia[2] | Safety and Tolerability Data from Completed & Ongoing Studies |



**PDUFA** = Prescription Drug User Fee Act

[1]Ballard C, et al. Lancet. 2018;17:213-222.[2]NUPLAZID Prescribing Information; Cummings J, et al. Lancet. 2014;383:533-540. Criteria for dementia in the study was MMSE <25.

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# Summary of Top-line Phase 3 CLARITY Results

**The study did not achieve statistical significance on the primary endpoint**

- Primary endpoint on HAMD-17 total score compared to placebo (p=0.296)
- Observed consistent improvement of depressive symptoms over time compared to placebo

**Pimavanserin showed positive improvement on the key secondary endpoint**

- Clinically meaningful improvement on disease severity as measured by CGI-S (nominal p=0.042)

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

- No meaningful effect on vital signs, metabolic parameters or extrapyramidal symptoms



**HAMD-17** = 17-item Hamilton Depression Rating Scale; **CGI-S** = Clinical Global Impressions – Severity
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# Pimavanserin Studies in Depression

## CLARITY-1 Study

- ✓ Achieved Significance on Primary Endpoint (HAMD-17)
- ✓ Achieved Significance on Key Secondary (SDS)
- ✓ 7 Additional Positive Secondaries (Including CGI-S & KSS)
- ✓ Well-tolerated

## Phase 3 CLARITY Study

- × Did Not Achieve Significance on Primary Endpoint (HAMD-17)
- ✓ Positive Improvement on Key Secondary (CGI-S)
- ✓ Positive Improvement on Daytime Wakefulness (KSS)
- ✓ Well-tolerated

## Open-Label Study*

*Parkinson's Disease with Comorbid Depression*

- ✓ Achieved Significance on Primary Endpoint (HAMD-17)
- ✓ Positive Improvement on Key Secondary (CGI-S)
- ✓ Positive Improvement on Sleep Quality (SCOPA-GS)
- ✓ Well-tolerated

At this time, we do not plan to pursue a broad adjunctive MDD indication



**SDS =** Sheehan Disability Scale; **KSS** = Karolinska Sleepiness Scale; **SCOPA-GS** = **SC**ales for **O**utcomes in **PA**rkinson's disease – **G**lobal **S**leep

*An 8-week, open-label, single-arm phase 2 study evaluating the efficacy and safety of pimavanserin as an adjunct to SSRI/SNRI or as monotherapy in adults with both Parkinson's disease and depression.

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# Phase 3 CLARITY Results

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

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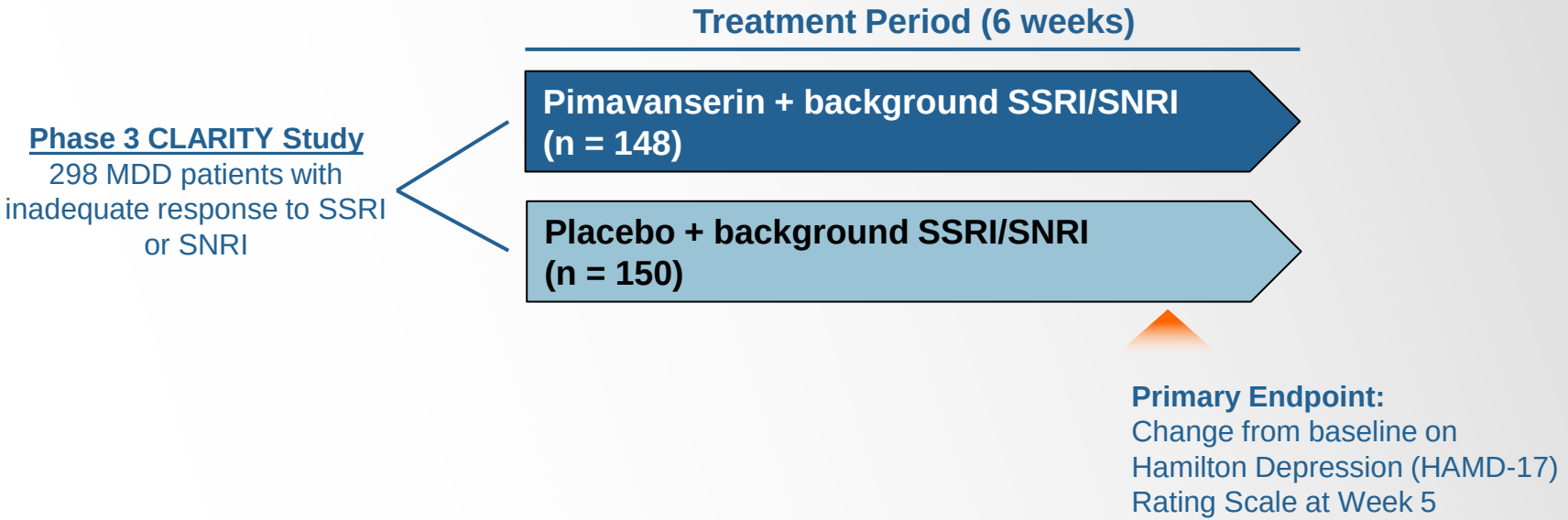
# Phase 3 (CLARITY-2 and CLARITY-3) Study Design

## 6-Week, Randomized, Double-blind, Placebo-controlled Multi-center Study:






The two identically designed Phase 3 studies (CLARITY-2 and CLARITY-3) were stopped at ~50% enrollment and combined into one study. The combined efficacy and safety analysis was pre-specified prior to data unblinding, following positive feedback from the FDA in May 2020.
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# Demographics and Baseline Characteristics
## (Randomized Analysis Set)

| | Placebo (n=150) | Pimavanserin (n=148) | Total (n=298) |
|---|---|---|---|
| **Age (years)** | 44.5 | 47.2 | 45.8 |
| **Sex, Female (%)** | 74.7 | 64.9 | 69.8 |
| **Age at MDD Diagnosis (years)** | 32.7 | 34.2 | 33.5 |
| **Duration of Current Episode of Depression (months)** | 18.4 | 17.3 | 17.8 |
| **MADRS Total Score** | 32.5 | 32.4 | 32.4 |
| **HAMD-17 Total Score** | 22.7 | 23.1 | 22.9 |
| **CGI-S Score** | 4.8 | 4.9 | 4.8 |



**MADRS** = Montgomery–Åsberg Depression Rating Scale

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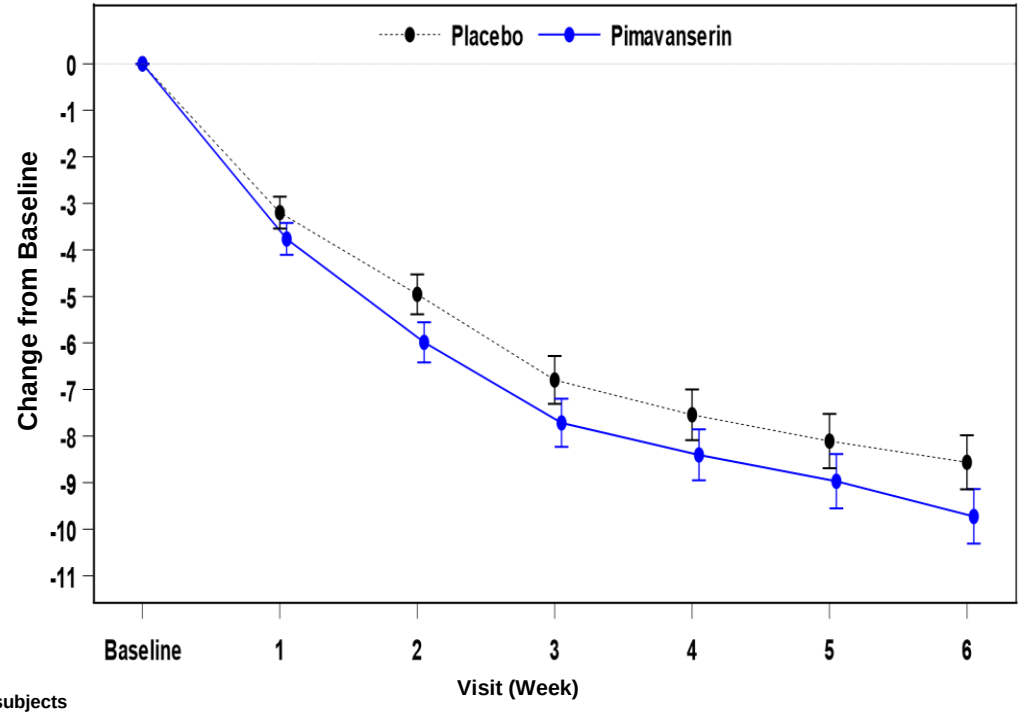
# Primary Endpoint: 17-Item Hamilton Depression Rating Scale (HAMD-17)
## (Full Analysis Set)




| No. of subjects | | | | | | | |
|---|---|---|---|---|---|---|---|
| Placebo | 149 | 146 | 142 | 141 | 138 | 135 | 131 |
| Pimavanserin | 148 | 144 | 140 | 141 | 139 | 138 | 129 |

**HAMD-17 at Week 5**
LSM (SE)

Pimavanserin: -9.0 (0.58)
Placebo: -8.1 (0.58)

*p-value = 0.296*



**Full Analysis Set =** subject was randomized and treated with at least one dose of study drug, and have both a Baseline and at least one post-Baseline HAMD-17 total score.
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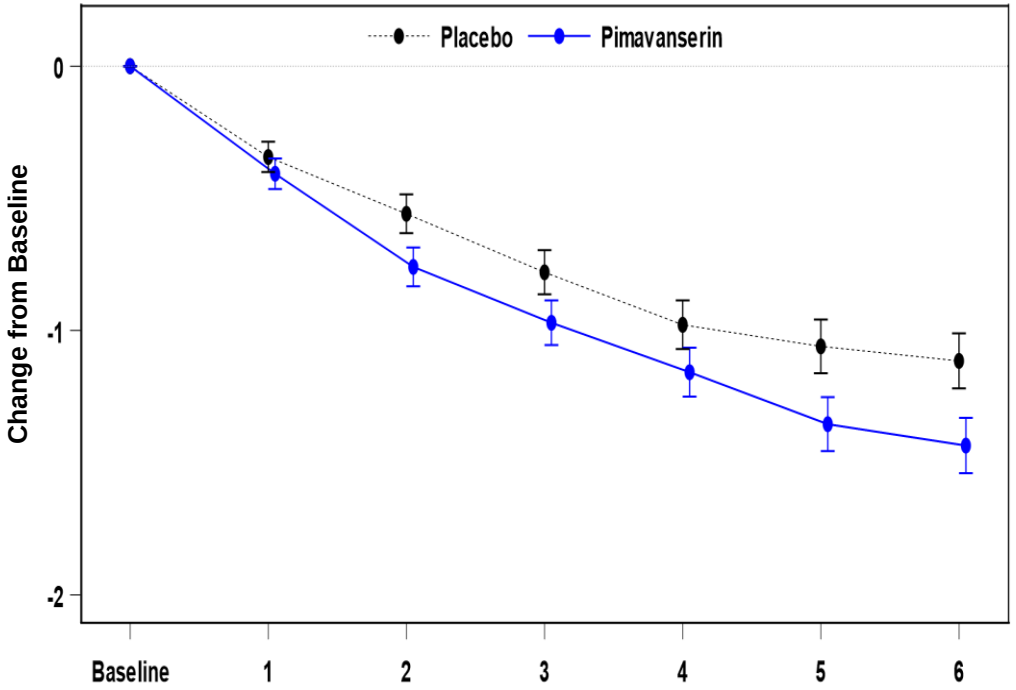
# Key Secondary Endpoint: Clinical Global Impression – Severity (CGI-S)
## (Full Analysis Set)




| No. of subjects | | | | | | | |
|---|---|---|---|---|---|---|---|
| Placebo | 149 | 146 | 142 | 142 | 138 | 135 | 131 |
| Pimavanserin | 148 | 144 | 140 | 141 | 139 | 138 | 129 |

**CGI-S at Week 5**
LSM (SE)

Pimavanserin: -1.4 (0.10)
Placebo: -1.1 (0.10)

*nominal p-value = 0.042*



**Full Analysis Set =** subject was randomized and treated with at least one dose of study drug, and have both a Baseline and at least one post-Baseline HAMD-17 total score.
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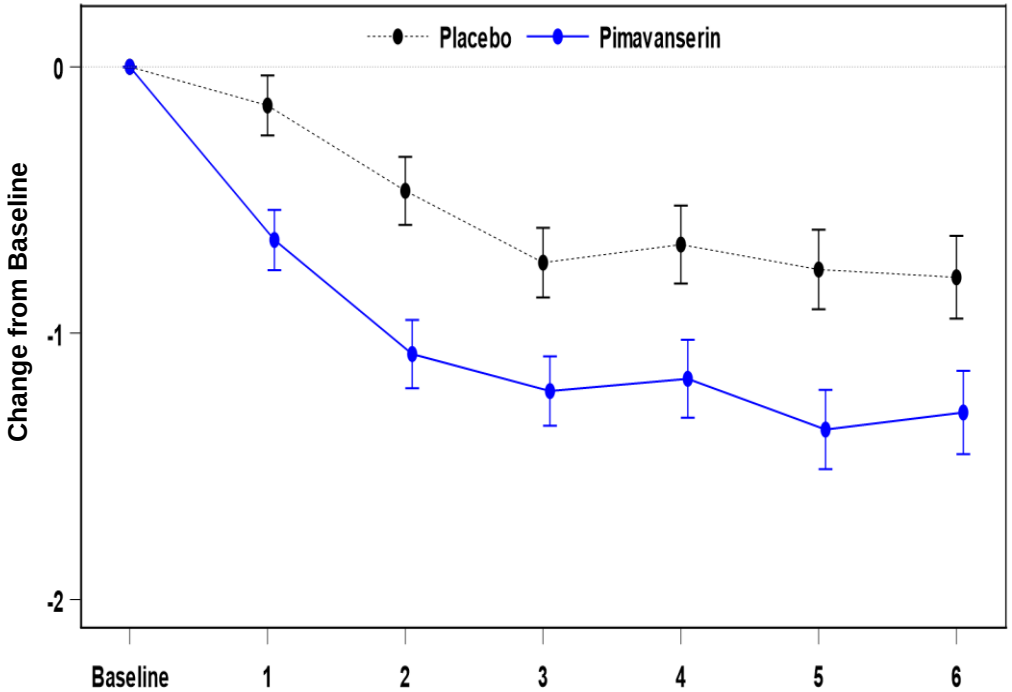
# Secondary Endpoint: Karolinska Sleepiness Scale (KSS)
## (Full Analysis Set)




| No. of subjects | | | | | | | |
|---|---|---|---|---|---|---|---|
| Placebo | 149 | 146 | 141 | 140 | 137 | 134 | 130 |
| Pimavanserin | 148 | 144 | 140 | 141 | 139 | 138 | 129 |

**KSS at Week 5**
LSM (SE)

Pimavanserin: -1.4 (0.15)
Placebo: -0.8 (0.15)

*nominal p-value = 0.005*

Clinically meaningful separation not achieved on other secondary endpoints



**Full Analysis Set =** subject was randomized and treated with at least one dose of study drug, and have both a Baseline and at least one post-Baseline HAMD-17 total score.
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# Summary of Adverse Events

| Safety Analysis Set | Phase 3 CLARITY | |
|---|---|---|
| | **Placebo (n=150)** | **Pimavanserin (n=148)** |
| **Any Patient w/ Adverse Event (AE)** | 82 (54.7%) | 86 (58.1%) |
| **Any Serious Adverse Event (SAE)** | 2 (1.3%) | 2 (1.4%) |
| **Any AEs leading to Discontinuation or Study Termination** | 4 (2.7%) | 4 (2.7%) |
| **Completed the Study** | 135 (90.0%) | 135 (91.2%) |
| | | |
| **Most Common AEs (>5% in any group)** | | |
| Diarrhea | 4 (2.7%) | 12 (8.1%) |
| Dry mouth | 4 (2.7%) | 11 (7.4%) |
| Nasopharyngitis | 9 (6.0%) | 5 (3.4%) |
| Headache | 27 (18.0%) | 31 (20.9%) |

No clinically significant differences in vital signs, metabolic parameters nor extrapyramidal symptoms were observed in the pimavanserin group compared to placebo



**Safety Analysis Set =** subject was randomized and treated with at least one dose of study drug.
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# Summary

**FDA accepts sNDA for dementia-related psychosis for filing:**

- FDA has not identified any potential review issues at this point in their evaluation
- FDA is not currently planning to hold an Advisory Committee meeting
- PDUFA Date: April 3, 2021

**Phase 3 CLARITY results in adjunctive MDD:**

- The study did not achieve statistical significance on the primary endpoint
- Observed consistent improvement of depressive symptoms at all time points compared to placebo
- Positive improvements observed on disease severity and daytime wakefulness*
- Pimavanserin was well-tolerated in the study



*As measured by CGI-S and KSS respectively, with nominal p-values less than 0.05.
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# Closing Remarks

Steve Davis
CEO

ACADIA® Pharmaceuticals

# Building a Leading CNS Platform

**DRIVE NUPLAZID® GROWTH IN PDP**

**DELIVER DRP OPPORTUNITY TO THE MARKET**

**DEVELOP INNOVATIVE TREATMENTS FOR UNMET NEEDS**



*2020 guidance provided May 7, 2020.
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# Q&A

JULY 20, 2020