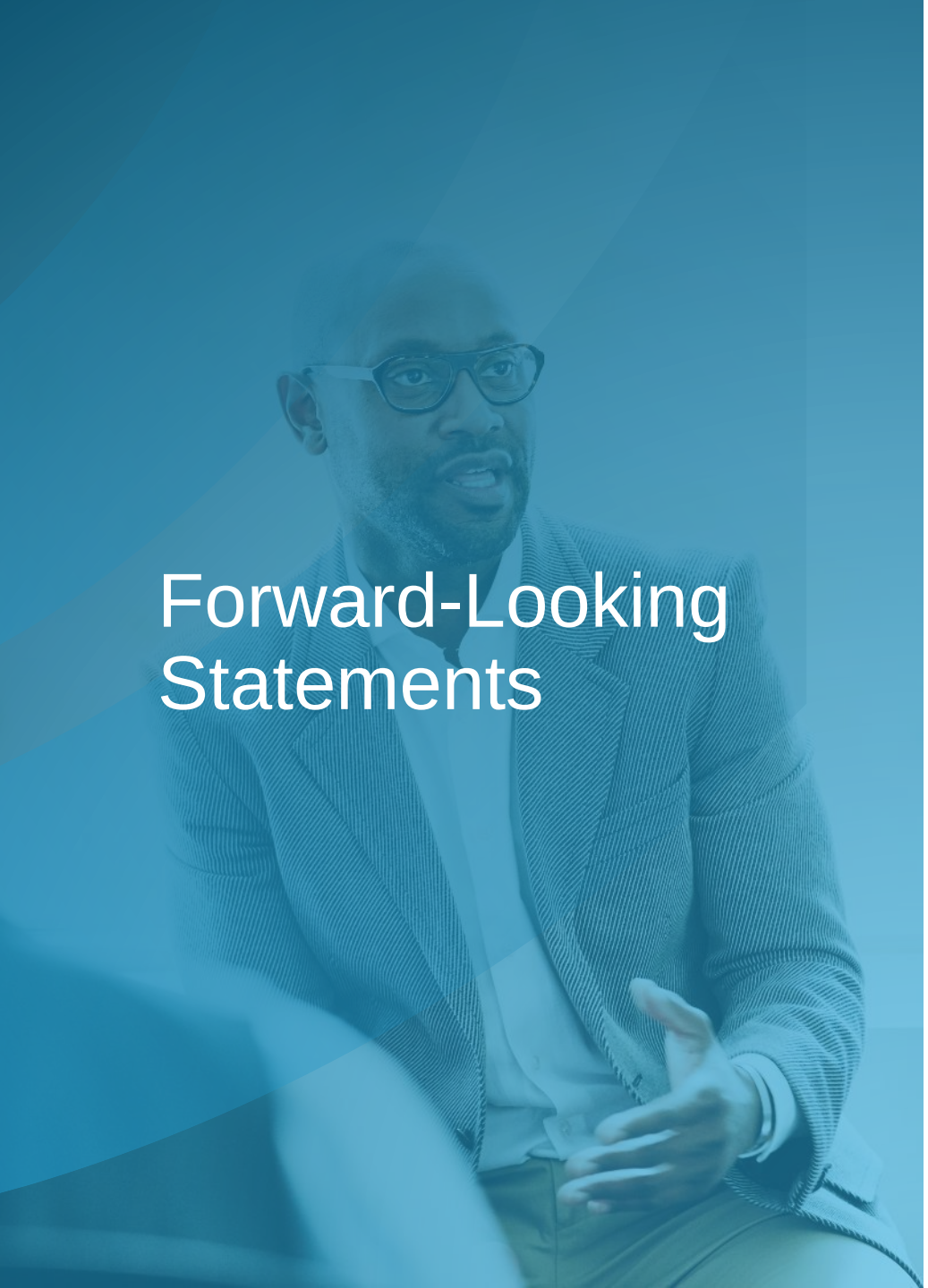
ACADIA

Second Quarter 2024 Earnings Call

August 6, 2024

Call Agenda

Welcome	**Al Kildani** | Senior Vice President, Investor Relations and Corporate Communications
CEO Opening Remarks	**Steve Davis** | President and Chief Executive Officer
Commercial Update	**Brendan Teehan** | Chief Operating Officer, Head of Commercial
R&D Update	**Elizabeth Thompson** | Executive Vice President, Head of Research and Development
Financial Update	**Mark Schneyer** | Chief Financial Officer
Closing Remarks	**Steve Davis** | President and Chief Executive Officer
Q&A Session	**Parag Meswani, Pharm D.** | Senior Vice President, Trofinetide – Rare Disease Franchise **Kimberly Manhard** | Senior Vice President, Global Strategic Planning and Execution



Forward-Looking Statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include all statements other than statements of historical fact and can be identified by terms such as “may,” “will,” “should,” “could,” “would,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “projects,” “predicts,” “outlook,” “potential” and similar expressions (including the negative thereof) intended to identify forward-looking statements. Forward-looking statements contained in this presentation, include, but are not limited to, statements about: (i) our business strategy, objectives and opportunities; (ii) plans for, including timing, development and progress of commercialization or regulatory timelines for, NUPLAZID, DAYBUE and our product candidates; (iii) benefits to be derived from and efficacy of our products, including the potential advantages of NUPLAZID and DAYBUE and expansion opportunities for NUPLAZID and DAYBUE in other indications, and for DAYBUE in jurisdictions outside the U.S.; (iv) estimates regarding the prevalence of the diseases targeted by our products and product candidates; (v) potential markets for any of our commercial products; and (vi) our estimates regarding our future financial performance, cash position, profitability or capital requirements. Forward-looking statements are subject to known and unknown risks, uncertainties, assumptions and other factors that may cause our actual results, performance or achievements to differ materially and adversely from those anticipated or implied by our forward-looking statements. Such risks, uncertainties and other factors include, but are not limited to: our dependency on the continued successful commercialization of NUPLAZID and DAYBUE and our ability maintain or increase sales of NUPLAZID or DAYBUE; the costs of our commercialization plans and development programs, and the financial impact or revenues from any commercialization we undertake; our ability to obtain necessary regulatory approvals for our product candidates and, if and when approved, market acceptance of our products; our dependence on third-party collaborators, clinical research organizations, manufacturers, suppliers and distributors; the impact of competitive products and therapies; our ability to generate or obtain the necessary capital to fund our operations; our ability to grow, equip and train our specialized sales forces; our ability to manage the growth and complexity of our organization; our ability to maintain, protect and enhance our intellectual property; and our ability to continue to stay in compliance with applicable laws and regulations. Given the risks and uncertainties, you should not place undue reliance on these forward-looking statements. For a discussion of these and other risks, uncertainties 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, 2023 as well as our subsequent filings with the Securities and Exchange Commission from time to time, including our quarterly report on Form 10-Q for the period ended March 31, 2024. The forward-looking statements contained herein are made as of the date hereof, and we undertake no obligation to update them after this date, except as required by law.

Opening Remarks

Steve Davis, President and Chief Executive Officer

Acadia Investment Thesis

Two successful commercial franchises

- $242.0M in 2Q 2024 revenues
  - NUPLAZID for hallucinations and delusions associated with Parkinson's disease
  - DAYBUE for Rett syndrome

Two late-stage assets with strong early-stage pipeline

- Ongoing P3 trial of ACP-101 in Prader-Willi syndrome
- Ongoing P2 / P3 program of ACP-204 in Alzheimer’s disease psychosis
- Numerous early-stage programs

Financial strength

- 46% YoY revenue growth in 2Q24
- Cash balance of $500.9M as of June 30, 2024

DAYBUE (trofinetide) is only approved in the U.S. by the FDA for the treatment of Rett syndrome in adults and pediatric patients two years of age and older.
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.

Commercial Product Highlights

DAYBUE

- 2Q net product sales of $84.6M, 11% sequential growth
- Sequential improvement in weekly rate of new patient starts and lower rate of discontinuations
- Active patients on therapy back to late 2023 levels
- Lowering guidance for FY24 to $340 to $370 million

NUPLAZID

- 2Q net product sales of $157.4 million, 11% year-over-year growth
- Growth driven by real-world evidence studies and label update
- Strong YTD performance and favorable market conditions lead us to raise FY24 guidance to $590 to $610 million
- Opportunity to address gap in awareness of hallucinations & delusions with targeted campaign

Deep CNS and Rare Disease Pipeline

Program	Indication	Preclinical	Phase 1	Phase 2	Phase 3	Marketed
NUPLAZID® (pimavanserin)	Parkinson's Disease Psychosis					
DAYBUE™ (trofinetide)	Rett Syndrome					
ACP-101[1,2]	Hyperphagia in Prader-Willi Syndrome					
ACP-204[2]	Alzheimer's Disease Psychosis					
ACP-2591[2]	Rett Syndrome; Fragile X Syndrome					
ASO Programs[2]	SYNGAP1; Rett syndrome; Undisclosed					
Multiple Undisclosed Programs	Neuropsychiatric and Rare Disorders					

[1] Acadia acquired Levo Therapeutics and its rights/licenses to ACP-101.
[2] The safety and efficacy of these investigational agents have not been established. There is no guarantee these investigational agents will be filed with or approved by any regulatory agency.
DAYBUE (trofinetide) is only approved in the U.S. by the FDA for the treatment of Rett syndrome in adults and pediatric patients two years of age and older.
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Commercial Update

Brendan Teehan, Chief Operating Officer, Head of Commercial

DAYBUE in 2024

2Q sequential performance:

- 12% *higher* weekly rate of new patient additions
- 46% *lower* weekly rate of discontinuations

900 active patients on therapy as of August 1

- Net patient adds recovered in 2Q but more slowly than anticipated

Sizeable future market opportunity:

- ~30% of all diagnosed Rett patients in the U.S. have initiated treatment by end of 2Q and continuing to grow

Expanding prescriber base:

- Driving greater penetration in high volume, COE-like institutions and community practices, where almost three quarters of all Rett patients are treated

Leveraging Real-World Experiences

IRSF ASCEND Conference, June 2024 Poster Presentations

- Assessing experiences with trofinetide for Rett syndrome: interviews with caregivers of patients in LAVENDER™, LILAC-1™, and LILAC-2™ studies
- Real-world benefits and tolerability of trofinetide for the treatment of Rett Syndrome: the LOTUS study
- Trofinetide for the treatment of Rett syndrome: long-term safety and efficacy results from the open-label LILAC-2 study

Real-World Experience

Stories from caregivers show the benefits observed in the real world are consistent with the clinical trial experience

GI Management Insights

Growing body of evidence suggesting diarrhea is more manageable in real-world practice than in P3 LAVENDER study

Long Term DAYBUE Revenue and Value Drivers

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Size of Opportunity	• ~1/3 of 5000 diagnosed patients have initiated DAYBUE therapy • Believe diagnosed & addressable population can expand to prevalence of 6,000-9,000
Market Research	• Surveyed HCPs state over next 24 months they expect to increase total RXs of DAYBUE to greater than 70% of their eligible patients
Persistency Outpacing Clinical Trial	• Tracking ~10 percentage points higher than what we saw in LILAC-1 • Real world persistency rate at 9 months remains at 58%
Average Dose	• Following dose adjustments, patients typically take between 75-80% of the label dose
Access to DAYBUE	• >80% of payors having written policies in place and ~90% conversion to paid over time

Dynamics Supporting Growth in NUPLAZID

$157.4M in net product sales in 2Q24, up 11% year-over-year

Real-World Evidence[1-3] findings:

- Reduced mortality when using pimavanserin as compared to off-label atypical antipsychotics
- Lower all-cause hospitalizations, ER visits, and shorter length of stays vs. atypical antipsychotics

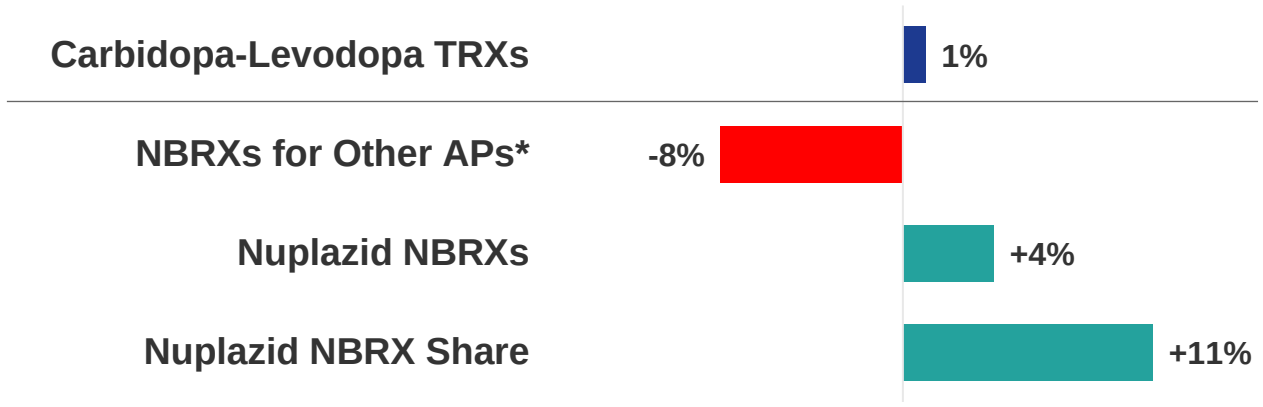
Label Change clarifying:

- NUPLAZID can be prescribed to treat patients with PDP, *with or without* dementia
- Thereby addressing confusion that existed in the marketplace about NUPLAZID's addressable population

1.Mosholder AD, Ma Y, Akhtar S, et al. Mortality among Parkinson's disease patients treated with pimavanserin or atypical antipsychotics: an observational study in Medicare beneficiaries. Am J Psychiatry. 2022;179(8):553-561.
2.Layton JB, Forns J, McQuay LJ, et al. Mortality in patients with Parkinson's disease-related psychosis treated with pimavanserin compared with other atypical antipsychotics: a cohort study. Drug Safety. Published online December 14, 2022. doi:10.1007/s40264-022-01260-6.; 3.Layton JB, Forns J, McQuay LJ, et al. Mortality in patients with Parkinson's disease-related psychosis treated with pimavanserin compared with other atypical antipsychotics: a cohort study. Supplementary material. Online resource. Drug Safety. Published online December 14, 2022. doi:10.1007/s40264-022-01260-6.

NUPLAZID Growing and Taking Share

PD and PDP Market 2Q24 vs 1Q24



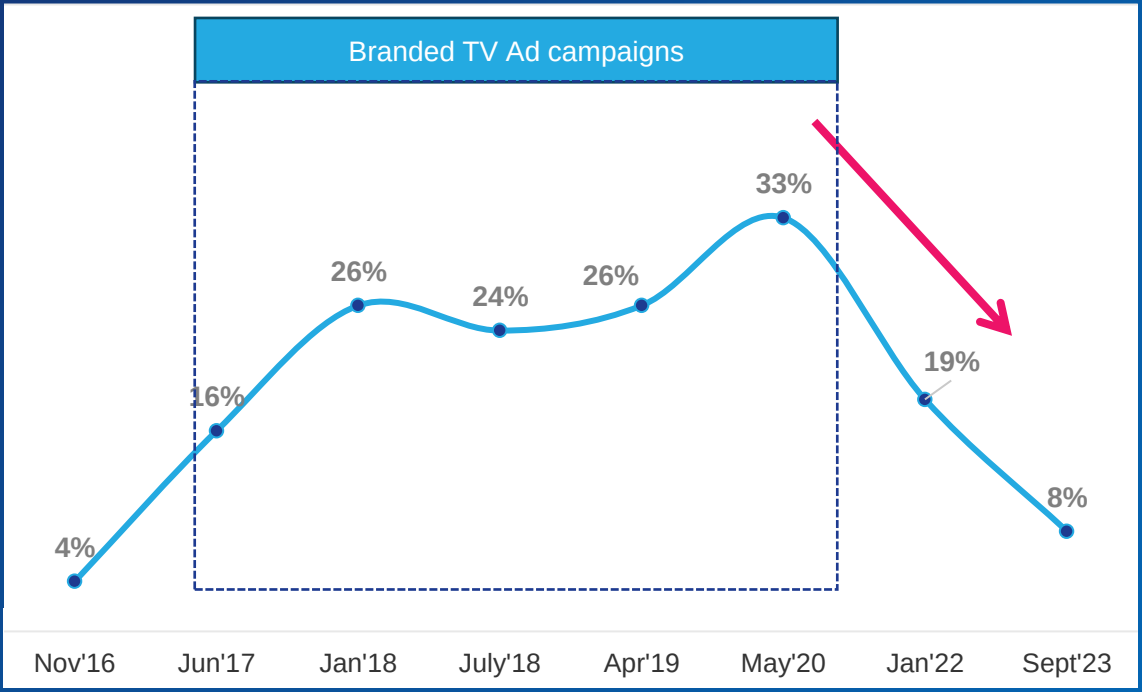
- PD broader market has stabilized
- Ended Q2 with the highest number of patients on NUPLAZID in the community setting since launch
  - Strong performance among continuing patient population together with share gain in new patients
- Seeing stability and future growth potential

Market data sourced from IQVIA from 7/18/24. PDP Market NBRx includes Aripiprazole, Clozapine, Nuplazid, Quetiapine, Rexulti, Risperidone.

Stabilized PD Market Conditions Create Attractive Environment to Launch Consumer Campaign

Disease State

Unaided awareness of hallucinations & delusions in PD market with caregivers and patients is down from a peak of 33% since stopping DTC advertising in November 2021*



Branded

- Awareness of NUPLAZID is **~15%***
- **~65%** of HCPs are extremely likely to prescribe NUPLAZID if requested by patient or caregiver*

* Source: Acadia Confidential Market Research

R&D Update

Elizabeth HZ Thompson,
Executive Vice President,
Head of Research and Development

Prader-Willi Syndrome Opportunity

Significant Unmet Need

- ~8,000-10,000 patients in the U.S.
- No FDA approved medicine to treat hyperphagia in PWS patients in the U.S.

- Rare and complex neurobehavioral genetic disorder that often leads to social isolation
- Hyperphagia is a defining characteristic of Prader-Willi syndrome (PWS) and commonly begins between the ages of 3-8
- Hyperphagia is characterized by unrelenting hunger
  - Often leads to obesity and behavioral challenges including anxiety and aggression
  - Extremely distressing for patients, parents and caregivers
- 30 years average life expectancy[1]

[1]Causes of Death in Prader-Willi Syndrome: Prader-Willi Syndrome Association (USA) 40-Year Mortality Survey. Genet Med. 2017. June ; 19(6): 635–642.

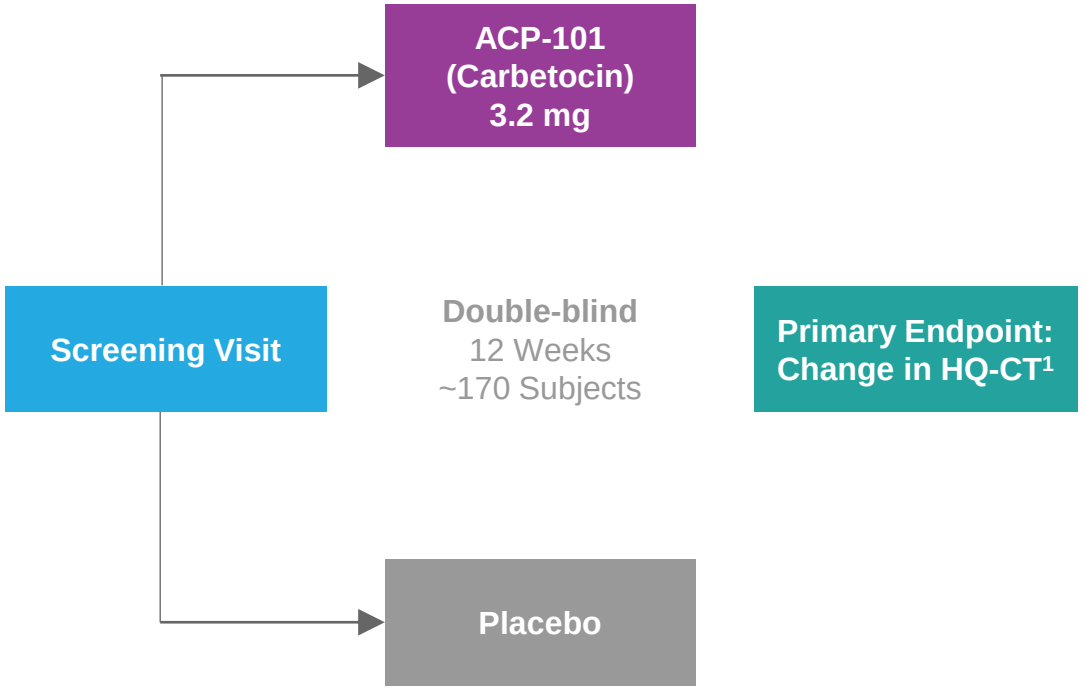
Ongoing Phase 3 Study of ACP-101 for the Treatment of Hyperphagia in PWS

COMPASSPWS

Trial builds on previous Phase 3 clinical trial experience

3.2 mg dose was observed to reduce hyperphagia-related behaviors

Phase 3 Study Design



[1]Hyperphagia Questionnaire for Clinical Trials (HQ-CT) is an observer-reported outcome measure that has been widely used in interventional studies to assess changes in hyperphagic behaviors in individuals with PWS.

ACP-204 in Alzheimer's Disease Psychosis (ADP)

Strategic goal: expand and extend neuropsychiatry portfolio

Target Product Profile

- Mitigate or eliminate QT prolongation
- Explore doses higher than pimavanserin 34 mg equivalent
- Improved time to onset of action

Phase 1 Results

- ✓ No sign of QT prolongation
- ✓ Wide dose range established supporting potential for ~2x pimavanserin 34 mg equivalent
- ✓ Steady state PK (5 days) achieved in less than half the time of pimavanserin (12 days)

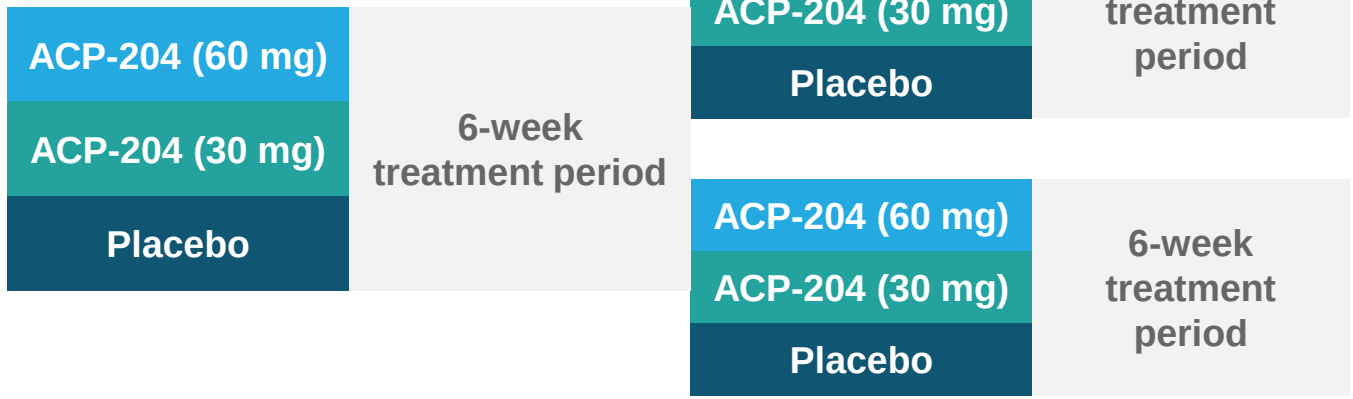
ACP-204: Phase 2 / Phase 3 Program for the Treatment of ADP

Pimavanserin experience supports P2 / P3 program

Phase 2 and each Phase 3 study designed and sized to be considered pivotal, if successful

Phase 2
N=318, double-blind, randomized 1:1:1

Two Phase 3 Studies
of similar size and design



Building Body of Evidence around DAYBUE with Presentations and Publications

LILAC-1 and LILAC-2

Open-label extension studies[1,2]

Long-term treatment continued to improve symptoms, without evidence of new safety concerns

96% of caregivers said they were satisfied or very satisfied with treatment efficacy

Over half said they had changes in their daily lives due to their child's improvement

Med
A Cell Press journal

LOTUS

Real-world observational evidence study[3]

Found evidence of significant variation in approach to titration and diarrhea management suggesting room for continued improvement in patient experience

Nonverbal communication, alertness and social interaction and connectedness are most consistently cited improvements

International Rett Syndrome Foundation
Accelerating Research. Empowering Families.

[1] Trofinetide for the treatment of Rett syndrome: Results from the open-label extension LILAC study. Percy et al, *Med*, June 24, 2024
[2] Trofinetide for the treatment of Rett syndrome: Long-term safety and efficacy results of the 32-month, open-label LILAC-2 study, Percy et al, *Med*, July 17, 2024
[3] Real-World Benefits and Tolerability of Trofinetide for the Treatment of Rett Syndrome: The LOTUS Study; Louise Cosand, Victor Abler, Haya Mayman, Jenny Downs et al , Presented at the 2024 IRSF Rett Syndrome Scientific Meeting, June 18–19, 2024, Westminster, CO, USA

Financial Update

Mark Schneyer, Chief Financial Officer

2Q24 Financial Highlights

Millions, Except EPS	2Q24	2Q23	*YoY Change*
TOTAL Net Sales	$242.0	$165.2	46%
NUPLAZID Net Product Sales	$157.4	$142.0	11%
DAYBUE Net Product Sales	$84.6	$23.2	265%
R&D	$76.2	$58.8	30%
SG&A	$117.1	$96.0	22%
Net Income (Loss)	$33.4	$1.1	-
EPS	$0.20	$0.01	-
		Year End 2023	
Cash Balance	$500.9	$438.9	

Updating FY 2024 Financial Guidance

	Prior FY24 Guidance	Updated FY24 Guidance
NUPLAZID Net Sales	$560 - $590 Million	$590 - $610 Million
NUPLAZID Gross-to-Net	25% - 29%	26% - 28%
DAYBUE Net Sales	$370 - $420 Million	$340 - $370 Million
Total Revenue	$930 Million - $1.01 Billion	$930 - $980 Million
R&D Expense	$305 - $325 Million	$305 - $315 Million
SG&A Expense	$455 - $480 Million	$465 - $480 Million
YE Cash	$585 - $655 Million	$575 - $625 Million

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Building On Our Success

2024 and Beyond

- Leverage physician and caregiver real world experience and capitalize on DAYBUE long-term value drivers
- Build on real-world evidence and favorable label clarification while introducing new DTC campaigns to grow NUPLAZID franchise
- Bring trofinetide to new markets outside the U.S. including Europe, Japan and Canada
- Progress P3 study of ACP-101 in hyperphagia in Prader-Willi syndrome
- Progress P2 / P3 program for ACP-204 in Alzheimer's disease psychosis
- Substantial and growing cash flow from operations

Q&A Session