

## Acadia Pharmaceuticals

**Commercial franchise impresses but pipeline concerns remain; Reit. Neutral**

Reiterate Rating: NEUTRAL | PO: 33.00 USD | Price: 26.36 USD

**Strong FY24 Daybue guidance of \$370-420mn**

ACAD reported strong 4Q Daybue and Nuplazid revenues of \$87.1mn (+30% q/q), and \$143.9mn (-1% q/q), respectively. On the call, mgmt. highlighted strong Daybue demand particularly in December as patients filled refills on accelerated timelines ahead of the holiday season. As such, ACAD expects a weaker 1Q due to lower January demand citing the earlier than expected refills in December, lower recorded patient / physician visits given fewer Rett clinic days as well as typical annual reauthorization impact seen for rare disease therapies (1Q guidance: \$76-82mn; ours: \$80.1mn). Mgmt. commented demand returned to 3Q/4Q levels in February and expects strong linear growth for the remainder of the year guiding to FY24 sales of \$370-420mn. To support their guidance, ACAD reported that Daybue real-world persistence continues to be 10+ percentage points above clinical experience and therefore expects long-term Daybue persistence to be above 50%. Additionally, the company expects linear growth in new patient starts during 2024 and assumes a constant dose compliance of 75-80%. We are encouraged by the current Daybue launch metrics that aligns with current feedback from our KOLs (see our [Daybue use survey](#)). We now model FY24 Daybue sales of \$400mn and continue to assume a step up in discontinuation rate to 50%. We reiterate our Neutral rating with \$33 PO ahead of the upcoming ph 3 ADVANCE-2 readout in NSOS.

**Phase 3 NSOS topline data expected by end of 1Q**

Mgmt. expects to report topline data for the ph 3 ADVANCE-2 trial evaluating pimavanserin in NSOS by end of 1Q. Mgmt. views the pimavanserin expansion oppy as highly attractive given no approved therapies and large US patient population of >700K pts. However, we note approval in NSOS has been elusive with multiple failures in recent years including NERV recently receiving a CRL for their roluperidone NDA. While the deficiencies the FDA highlighted for roluperidone are mostly covered by pimavanserin's development design, we note the key question on 'what a clinically meaningful and approvable treatment effect is for NSOS' has not been outlined by the FDA. We await the topline readout before assigning standalone value and include it in our \$1.4bn pipeline plug with their PWS (ph 3 ongoing) and ADP (ph 2/3 ongoing) clinical programs.

**Changes to our DCF-based model**

We roll the quarter, update for 4Q results, cash and share count and add 2024 quarterly estimates to our model. We slightly raise our FY24 Nuplazid estimates to \$575mn including recent price increases and higher 2024 GtN expectations (FY24 sales guidance: \$560-590mn). We also increase our 2024 op ex estimates in line with mgmt. guidance.

Estimates (Dec) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	(1.34)	(0.37)	0.95	1.19	1.69
EPS Change (YoY)	-27.6%	72.4%	NM	25.3%	42.0%
Consensus EPS (Bloomberg)			1.00	1.77	2.83
DPS	0	0	0	0	0
Valuation (Dec)					
P/E	NM	NM	27.7x	22.2x	15.6x
EV / EBITDA*	NM	NM	27.8x	21.6x	14.7x
Free Cash Flow Yield*	-2.6%	0.8%	4.7%	5.6%	7.6%

\* For full definitions of *IQmethod*<sup>SM</sup> measures, see page 5.

27 February 2024

## Equity

**Key Changes**

(US\$)	Previous	Current
2024E Rev (m)	887.6	975.1
2025E Rev (m)	1,003.9	1,107.9
2026E Rev (m)	NA	1,240.6
2024E EPS	0.71	0.95
2025E EPS	1.12	1.19
2026E EPS	NA	1.69

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**Stock Data**

Price	26.36 USD
Price Objective	33.00 USD
Date Established	14-Dec-2023
Investment Opinion	C-2-9
52-Week Range	17.71 USD - 33.99 USD
Mkt Val (mn) / Shares Out (mn)	4,328 USD / 164.2
Free Float	73.5%
Average Daily Value (mn)	39.93 USD
BofA Ticker / Exchange	ACAD / NAS
Bloomberg / Reuters	ACAD US / ACAD.OQ
ROE (2024E)	28.6%
Net Dbt to Eqty (Dec-2023A)	-53.7%
ESGMeter <sup>TM</sup>	Low

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Timestamp: 27 February 2024 09:50PM EST

**See page 3 for abbreviations**

# iQprofile<sup>SM</sup> Acadia Pharmaceuticals

## iQmethod<sup>SM</sup> – Bus Performance\*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Return on Capital Employed	-36.0%	-9.5%	25.0%	22.7%	23.9%
Return on Equity	-45.9%	-14.5%	28.6%	25.7%	26.9%
Operating Margin	-43.2%	-10.1%	14.9%	16.9%	22.2%
Free Cash Flow	(114)	36	203	243	327

## iQmethod<sup>SM</sup> – Quality of Earnings\*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash Realization Ratio	NM	NM	1.3x	1.3x	1.2x
Asset Replacement Ratio	0x	11.9x	17.9x	26.9x	40.2x
Tax Rate	NM	NM	NM	NM	NM
Net Debt-to-Equity Ratio	-15.5%	-53.7%	-73.4%	-84.2%	-90.7%
Interest Cover	NA	NA	NA	NA	NA

## Income Statement Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Sales	517	726	975	1,108	1,241
% Change	6.8%	40.4%	34.2%	13.6%	12.0%
Gross Profit	507	685	926	1,053	1,179
% Change	9.0%	35.1%	35.3%	13.6%	12.0%
EBITDA	(222)	(73)	146	188	276
% Change	-32.6%	67.0%	NM	29.0%	46.9%
Net Interest & Other Income	13	33	33	33	33
<b>Net Income (Adjusted)</b>	<b>(216)</b>	<b>(61)</b>	<b>157</b>	<b>200</b>	<b>288</b>
<b>% Change</b>	<b>-28.7%</b>	<b>71.6%</b>	<b>NM</b>	<b>26.8%</b>	<b>44.1%</b>

## Free Cash Flow Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Net Income from Cont Operations (GAAP)	(211)	(41)	178	220	308
Depreciation & Amortization	2	0	0	0	0
Change in Working Capital	38	1	1	1	1
Deferred Taxation Charge	NA	NA	NA	NA	NA
Other Adjustments, Net	57	78	28	28	28
Capital Expenditure	0	(3)	(5)	(7)	(10)
<b>Free Cash Flow</b>	<b>-114</b>	<b>36</b>	<b>203</b>	<b>243</b>	<b>327</b>
<b>% Change</b>	<b>10.1%</b>	<b>NM</b>	<b>464.2%</b>	<b>19.6%</b>	<b>34.8%</b>
Share / Issue Repurchase	8	0	0	0	0
Cost of Dividends Paid	0	0	0	0	0
Change in Debt	0	0	0	0	0

## Balance Sheet Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash & Equivalents	115	293	532	812	1,175
Trade Receivables	62	62	62	62	62
Other Current Assets	331	195	159	123	87
Property, Plant & Equipment	6	9	14	20	30
Other Non-Current Assets	74	68	68	68	68
<b>Total Assets</b>	<b>588</b>	<b>627</b>	<b>835</b>	<b>1,085</b>	<b>1,423</b>
Short-Term Debt	0	0	0	0	0
Other Current Liabilities	126	127	129	131	132
Long-Term Debt	53	53	53	53	53
Other Non-Current Liabilities	9	0	0	0	0
<b>Total Liabilities</b>	<b>187</b>	<b>180</b>	<b>182</b>	<b>184</b>	<b>186</b>
<b>Total Equity</b>	<b>400</b>	<b>447</b>	<b>653</b>	<b>901</b>	<b>1,237</b>
<b>Total Equity &amp; Liabilities</b>	<b>588</b>	<b>627</b>	<b>835</b>	<b>1,085</b>	<b>1,423</b>

\* For full definitions of iQmethod<sup>SM</sup> measures, see page 5.

## Company Sector

Biotechnology

## Company Description

Acadia Pharmaceuticals is a biopharmaceutical company based in San Diego, CA focused on the development of therapeutics to treat CNS disorders. Its lead asset Nuplazid (pimavanserin) has been approved for the treatment of Parkinson's Disease Psychosis (PDP). Second asset, Daybue, was recently approved for the treatment of Rett syndrome.

## Investment Rationale

We rate ACAD shares Neutral. Lead asset Nuplazid was launched in US in Parkinson's disease psychosis (PDP) in June 2016. Nuplazid treats the symptoms of psychosis without impacting the control of motor symptoms from the underlying Parkinson's Disease. Second drug, Daybue, was recently approved in Rett syndrome. ACAD is also evaluating its next-gen asset, ACP-204, in Alzheimer's disease psychosis and potentially, PDP. ACAD is also exploring ACP-101 in Prader-Willi syndrome related hyperphagia.

## Stock Data

Average Daily Volume 1,514,794

## Quarterly Earnings Estimates

	2023	2024
Q1	-0.27A	0.06E
Q2	0.01A	0.26E
Q3	-0.40A	0.32E
Q4	0.28A	0.30E

## Abbreviations

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ADP: Alzheimer's disease psychosis

ACAD: Acadia Pharmaceuticals

CRL: complete response letter

GtN: gross-to-net

KOL: key opinion leaders

NDA: New Drug Application

NERV: Minerva Neurosciences

NSOS: negative symptoms of schizophrenia

Op ex: operating expenses

Oppy: opportunity

Ph: phase

Pts: patients

PWS: Prader-Willi syndrome

## Price objective basis & risk

### Acadia Pharmaceuticals (ACAD)

Our DCF-derived PO of \$33 encompasses commercial drug Nuplazid in PDP at \$16/share. Daybue in Rett represents \$16/share to our PO. The remainder of our net present value (NPV) comes from pipeline and cash. We use a weighted-average cost of capital (WACC) of 9% for PDP and Rett, consistent with how we value other drugs in similar stages of development in our coverage universe. We assume a 21% tax rate for ACAD and zero terminal value.

Downside risks to our PO are 1) slower-than-expected commercialization of Nuplazid and Daybue, 2) stronger-than-expected competition from other 5HT2A compounds and other drugs in development for the same indications as Nuplazid and Daybue, and 3) negative results in pipeline indications.

Upside risks are 1) faster-than-expected Nuplazid and Daybue uptake in the US, 2) potential for partnerships or transactions with larger pharma companies, and 3) advances of early-stage pipeline assets in pain and central nervous system (CNS) disorders.

## Analyst Certification

I, Tazeen Ahmad, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

### US - Biotechnology Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
<b>BUY</b>				
	4D Molecular Therapeutics, Inc.	FDMT	FDMT US	Tazeen Ahmad
	Alnylam Pharmaceuticals	ALNY	ALNY US	Tazeen Ahmad
	Amicus Therapeutics	FOLD	FOLD US	Tazeen Ahmad
	Annexon Biosciences	ANNX	ANNX US	Tazeen Ahmad
	Apellis Pharmaceuticals	APLS	APLS US	Tazeen Ahmad
	Argenx SE	ARGX	ARGX US	Tazeen Ahmad
	Arvinas	ARVN	ARVN US	Tazeen Ahmad
	Ascendis Pharma	ASND	ASND US	Tazeen Ahmad
	Biocryst Pharmaceuticals Inc	BCRX	BCRX US	Tazeen Ahmad
	BioNTech	BNTX	BNTX US	Tazeen Ahmad
	Denali Therapeutics	DNLI	DNLI US	Tazeen Ahmad
	Inozyme Pharma, Inc.	INZY	INZY US	Tazeen Ahmad
	Merus	MRUS	MRUS US	Tazeen Ahmad
	Neurocrine Biosciences	NBIX	NBIX US	Tazeen Ahmad
	Ocular Therapeutix	OCUL	OCUL US	Tazeen Ahmad
	PepGen Inc	PEPG	PEPG US	Tazeen Ahmad
	Rhythm Pharmaceuticals	RYTM	RYTM US	Tazeen Ahmad
	Sarepta Therapeutics	SRPT	SRPT US	Tazeen Ahmad
	Ultragenyx Pharmaceuticals	RARE	RARE US	Tazeen Ahmad
<b>NEUTRAL</b>				
	Acadia Pharmaceuticals	ACAD	ACAD US	Tazeen Ahmad
	Incyte Corporation	INCY	INCY US	Tazeen Ahmad
	Prothena Corporation	PRTA	PRTA US	Tazeen Ahmad
	SAGE Therapeutics	SAGE	SAGE US	Tazeen Ahmad
<b>UNDERPERFORM</b>				
	Achilles Therapeutics	ACHL	ACHL US	Tazeen Ahmad
	Fate Therapeutics	FATE	FATE US	Tazeen Ahmad
	Fulcrum Therapeutics	FULC	FULC US	Tazeen Ahmad
	Pharvaris	PHVS	PHVS US	Tazeen Ahmad
	PTC Therapeutics	PTCT	PTCT US	Tazeen Ahmad

## US - Biotechnology Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
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**iQmethod<sup>SM</sup> Measures Definitions****Business Performance**

Return On Capital Employed

Return On Equity  
Operating Margin  
Earnings Growth  
Free Cash Flow

**Quality of Earnings**

Cash Realization Ratio  
Asset Replacement Ratio  
Tax Rate  
Net Debt-To-Equity Ratio  
Interest Cover

**Valuation Toolkit**

Price / Earnings Ratio  
Price / Book Value  
Dividend Yield  
Free Cash Flow Yield  
Enterprise Value / Sales

EV / EBITDA

**Numerator**

NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization

Net Income  
Operating Profit  
Expected 5 Year CAGR From Latest Actual  
Cash Flow From Operations – Total Capex

**Numerator**

Cash Flow From Operations  
Capex  
Tax Charge  
Net Debt = Total Debt – Cash & Equivalents  
EBIT

**Numerator**

Current Share Price  
Current Share Price  
Annualised Declared Cash Dividend  
Cash Flow From Operations – Total Capex  
EV = Current Share Price × Current Shares + Minority Equity + Net Debt + Other LT Liabilities  
Enterprise Value

**Denominator**

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill  
Amortization  
Shareholders' Equity  
Sales  
N/A  
N/A

**Denominator**

Net Income  
Depreciation  
Pre-Tax Income  
Total Equity  
Interest Expense

**Denominator**

Diluted Earnings Per Share (Basis As Specified)  
Shareholders' Equity / Current Basic Shares  
Current Share Price  
Market Cap = Current Share Price × Current Basic Shares  
Sales

Basic EBIT + Depreciation + Amortization

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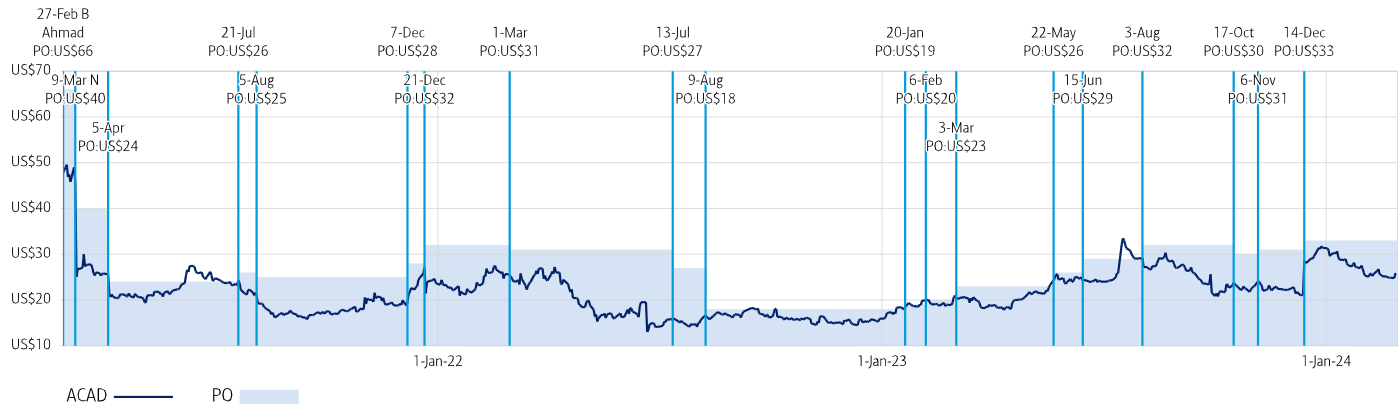
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### Acadia Ph (ACAD) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

### Equity Investment Rating Distribution: Health Care Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	234	60.94%	Buy	115	49.15%
Hold	80	20.83%	Hold	36	45.00%
Sell	70	18.23%	Sell	29	41.43%

### Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

<sup>R1</sup> Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster <sup>R2</sup>
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

<sup>R2</sup> Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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