

Finger On The Pulse

US SMID Cap Biotech Beat

Edition 20: Reiterating: SMID Cap to Big Cap Part 2: Our 4 commercial stage lenses

What's new? i) Examining implied relative pipeline valuations; ii) Part 2: transition from SMID to Big; iii) Introducing commercial stock selection process.

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In Case You Missed It

Biotech Beat Series - Past Macro Outlook Editions

- [**Edition 16:** Exposure increases but performance still weak](#)
- [**Edition 17:** FDA Survey Cycle 2: A little more positive. ASCO for our coverage.](#)
- [**Edition 18:** Transition: SMID Cap to Big Cap Part 1: Revenue diversification](#)
- [**Edition 19:** Transition: SMID Cap to Big Cap Part 2: Pseudo-LOE and organic/inorganic offsets](#)

Podcasts, KOL Series and More...

- [Highlights from our Recent KOL Discussion on the DMD Landscape](#)
- [Recent KOL Check Suggests Strong Long-Term Potential for Vyvgart in CIDP](#)
- [Highlights from Recent Discussion with Multiple Myeloma KOL](#)
- [Highlights from our Recent KOL Discussion on the TTR-CM Landscape](#)

Relevant Notes

- [Clinical Trial Pipeline Tracker](#)
- [June Month Ahead](#)
- [Assessing FDA Changes Part 2: Updated Corporate Survey Results & Call with ex-FDA Official](#)

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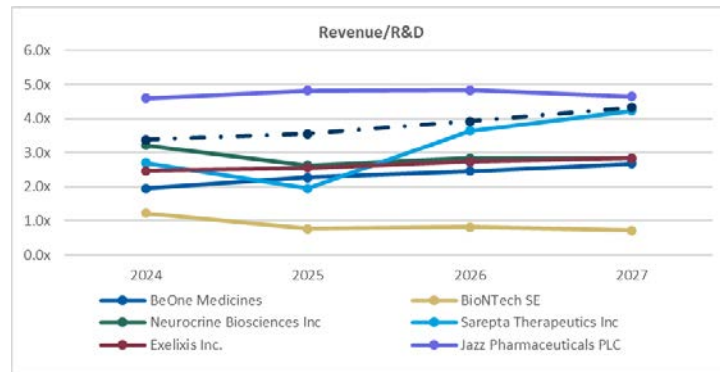
Market Value Of R&D Investments

EV To R&D Spend Ratio					
Company	EV \$bn	2024	2025	2026	2027
Eli Lilly & Co.	758	66.0x	58.4x	51.1x	45.0x
Johnson & Johnson	392	24.1x	27.3x	25.4x	24.3x
Abbvie Inc.	403	46.7x	44.5x	41.5x	38.7x
Merck & Co., Inc.	229	19.3x	15.4x	13.8x	12.3x
Amgen Inc.	209	32.2x	29.8x	28.4x	27.3x
Pfizer Inc	186	18.3x	16.6x	17.0x	17.2x
Gilead Sciences Inc.	157	23.0x	27.0x	24.9x	23.1x
Bristol Myers Squibb Co	158	15.7x	16.8x	17.2x	17.5x
Regeneron Pharmaceuticals Inc.	43	14.7x	7.3x	6.6x	6.1x
argenx SE	37	43.7x	30.7x	25.6x	24.1x
Alnylam Pharmaceuticals Inc	39	29.9x	36.1x	33.5x	30.9x
Biogen Inc	23	13.3x	11.5x	9.7x	8.2x
BeOne Medicines	31	9.9x	13.7x	11.9x	10.5x
BioNTech SE	12	7.5x	2.8x	2.5x	2.8x
Insmed Inc	17	18.4x	24.3x	23.6x	23.5x
Blueprint Medicines Corporation	8	31.7x	21.8x	20.3x	18.4x
Incyte Corp	11	4.7x	5.9x	5.1x	4.3x
Biomarin Pharmaceutical Inc	11	17.6x	12.5x	11.1x	9.5x
Neurocrine Biosciences Inc	11	16.6x	9.8x	8.3x	6.6x
Sarepta Therapeutics Inc	4	20.8x	3.1x	3.4x	1.3x
Exelixis Inc.	11	9.7x	12.0x	10.5x	8.1x
Ascendis Pharma A/S	9	25.3x	23.1x	22.2x	20.3x
Halozyme Therapeutics, Inc	8	90.4x	103.2x	89.7x	77.0x
Jazz Pharmaceuticals PLC	5	17.2x	7.5x	5.8x	4.1x
Legend Biotech Corp	6	13.5x	14.1x	11.5x	9.8x
Axsome Therapeutics	5	24.0x	29.2x	26.6x	22.1x
Moderna Inc	1	1.5x	1.0x	2.0x	3.3x
Ionis Pharmaceuticals Inc	5	5.5x	6.0x	6.2x	6.3x
Genmab A/S	-12	-1.2x	-2.0x	-3.0x	-4.1x
Average		20.6x	18.7x	17.1x	15.5x

Key Takeaways:

Screening Step 1: Simple metric of EV to R&D shows wide variance in pipeline perception. We highlight our Overweight rated names among our SMid Cap biotech coverage where the long-term (2027) EV/R&D multiple is ~10x or lower (vs average of MS coverage 15.5x in 2027).

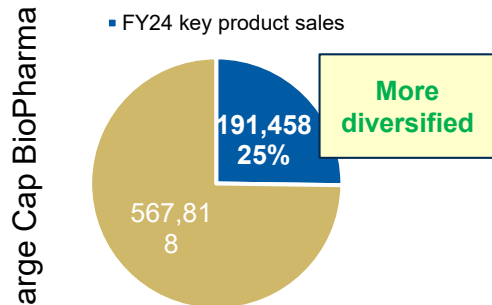
Screening Step 2: Sales/R&D: Sector Average = 3.4x 2024 going to ~4.3x 2027: Screens out JAZZ. Highlights Biomarin, Legend, BeOne, Neurocrine, Exelixis & BioNTech as key Overweight stock picks.



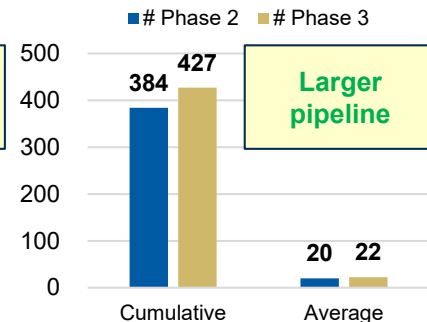
SMid Cap to Big Cap: Who will make the leap?

1 SMID Cap to Big Cap: Large BioPharma v. Commercial SMID Biotech – 3 key differences

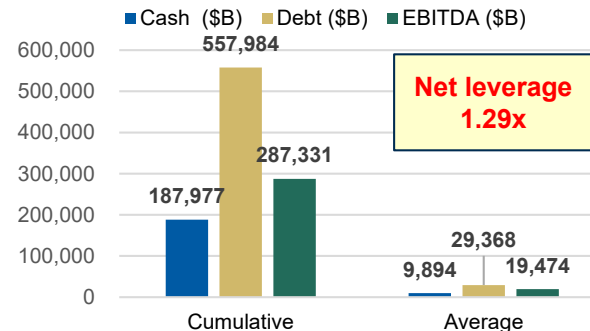
1) Key product exposure



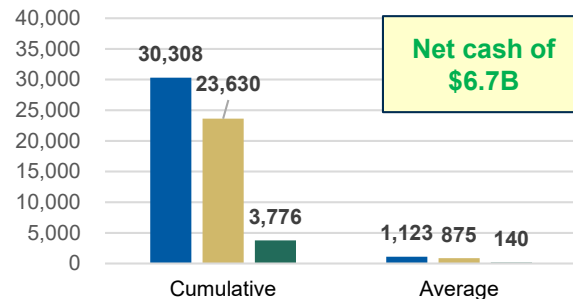
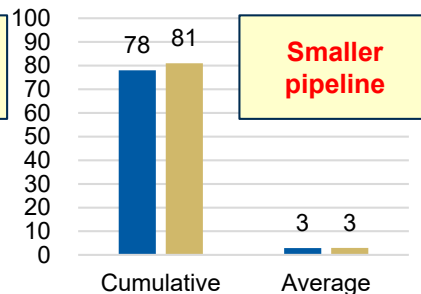
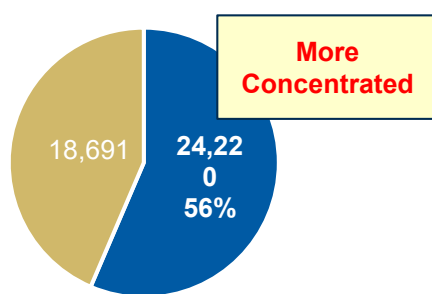
2) R&D Pipeline Programs



3) Balance Sheet Capacity



Commercial SMID Biotech



Source: Morgan Stanley Research, Company Data, FactSet, Visible Alpha

Large Cap BioPharma: ABBV, AMGN, BILB, BNTX, GILD, REGN, RPRX, VRTX, AZN, BMY, GSK, JNJ, LLY, MRK, NVO, NVS, PFE RO-C, SNY

Commercial SMID Biotech: ACAD, ALNY, APLS, ARGX, ARQT, ASND, AXSM, BMNR, BPMC, EXEL, FOLD, GMAB, HALO, IMCR, INCY, IONS, JAZZ, LEGN, MIRM, NBIX, OGN, ONC, RARE, RYTM, SAGE, SRPT, YMAB

1 SMID Cap to Big Cap – Examining data behind our 3 key differences

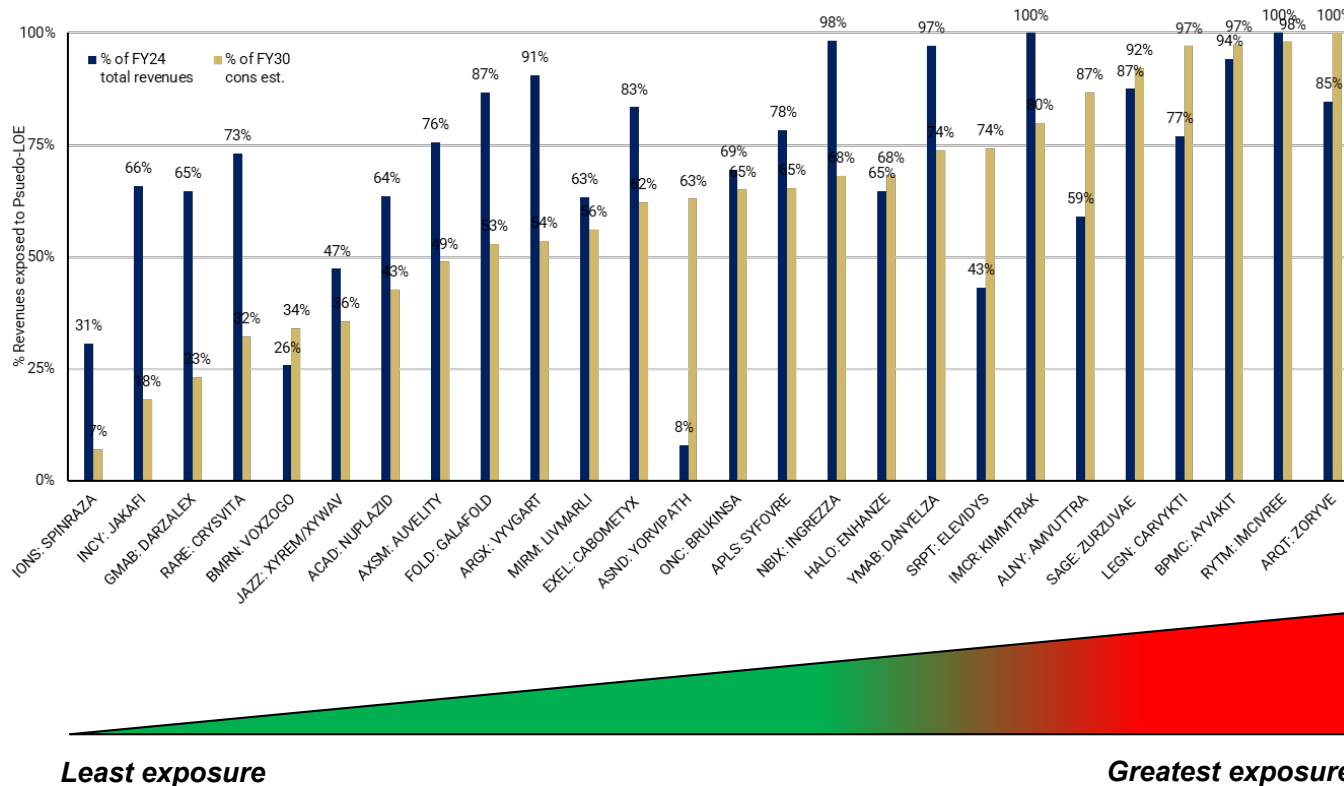
	BioPharma	SMid Biotech
Count	19	27
Market Cap. (\$bn)	\$3,405	\$236
Cash (\$bn)	\$188	\$30
Debt (\$bn)	\$558	\$24
Net Debt (\$bn)	\$370	(\$7)
EBITDA (\$bn)	\$287	\$4
Net leverage	1.3	-1.8
FY24 key product sales (\$bn)	\$191	\$24
FY24 remaining sales (\$bn)	\$1	\$0
Net sales (\$bn)	\$759	\$43
% exposure	25%	56%
# Phase 2	384	78
# Phase 3	427	81

- 1) Commercial Stage SMID Cap biotech = high revenue concentration
- 2) High revenue concentration = need for pipeline fruition
- 3) SMID Cap low leverage needed to balance pipeline funding & single product revenue risk.

Source: Morgan Stanley Research, Company Data, FactSet, Visible Alpha



2 SMID Cap to Big Cap: change in revenue concentration FY24 to FY30



Stocks with a decreasing exposure to single product revenue should be favored over time

However, caution needs to be exercised when using this screen

A decrease in single product revenue exposure may be via favorable means (e.g. pipeline fruition as in the case of RARE)

A decrease in single product revenue exposure may be via unfavorable means (e.g. LOE while balance of revenue is stagnant as in the Case of GMAB's Darzalex)

3

SMID Cap to Big Cap: Assessing reasons for expected change in revenue concentration - “Pseudo-LOE” and organic/inorganic offsets

Ticker	Key product	Approved indication	Pseudo LOE	Offsets
IONS	SPINRAZA	Spinal muscular atrophy (SMA)	Patent protection until at least 2035	Wainua, Tryngolza, donidalorsen
INCY	JAKAFI	Myelofibrosis (MF), Polycythemia vera, Graft-versus-host disease (GVHD)	U.S. IP expiration in 2028	Success with LIMBER lifecycle efforts (i.e., mCALR, JAK2V617F)
GMAB	DARZALEX	Multiple myeloma	Decrease in Darzalex royalties to Genmab in the 2030s	Pipeline diversification, with stronger pivot to proprietary assets
RARE	CRYSVITA	X-linked hypophosphatemia	Likely LOE: 2030 (Regulatory exclusivity - XLH)	Pipeline
BMRN	VOXZOGO	Achondroplasia	Share shift to competitors in-development for achondroplasia	Voxzogo indication expansion & success with long-acting CNP agent
JAZZ	XYREM/XYWAV	Narcolepsy, Idiopathic Hypersomnia	FY 27 high sodium non-authorized generics, oxybate competition (Orexin-2)	JZP441 orexin-2 program, XYWAV rebating
ACAD	NUPLAZID	Parkinson's disease psychosis	Daybue - emerging competition in Rett	ACP-101 in PWS, ACP-204 AD Psychosis
AXSM	AUVELITY	Major depressive disorder (MDD)	Risk of additional generic filers for Auvelity	Strength of Auvelity IP estate & continued diversification of Axsome's revenue base
FOLD	GALAFOLD	Fabry Disease	Settlement w/ Teva (2037)	Pipeline
ARGX	VYVGART	generalized myasthenia gravis (gMG)	Share shift to competition in MG and/or pricing risk for the tail on the Vyvgart franchise	Continued growth of MG, success with CIDP, and next-gen FcRn agent ARGX-213
MIRM	LIVMARLI	Cholestatic pruritus	Method of Use patents 2032-2040	Volixibat, MRM-3379
EXEL	CABOMETYX	1L RCC, HCC, NET	FY30 LOE (composition of matter)	zanzalitinib (STELLAR 303, 304, 305, 311)
ASND	YORVIPATH	Hypoparathyroidism	Potential competition from AstraZeneca and MBX Biosciences	Strong commercialization from 1st mover advantage, and undifferentiated competitor data
ONC	BRUKINSA	CLL/SLL, WM, MZL	Brukinsa IRR, Pirobrutinib competition	BGB-16673, Sonrotoclast, Other pipeline
APLS	SYFOVRE	Geographic atrophy (GA) secondary to age-related macular degeneration	CoM patent approx. 2035 incl. assumed customary extensions	Potential next-gen GA therapy (e.g. siRNA combo)
NBIX	INGREZZA	Tardive Dyskinesia, HD Chorea	FY27 CMS price negotiations (effective FY29)	Lifecycle management with NBI-1065890/NBI-1140675
HALO	ENHANZE	rHuPH20 for SC drug delivery	CMS draft guidance for price negotiation for fixed-combination products	Vyvgart indications/Business development
YMAB	DANYELZA	Relapsed or refractory high-risk neuroblastoma in the bone or bone marrow	Competition, patent to Feb 2034	Growth ex-US, SADA platform
SRPT	ELEVIDYS	Duchenne muscular dystrophy (ambulatory and non-ambulatory)	CoM patent 2037	Pipeline in LGMD, FSHD1, DM1, SCA2, HD
IMCR	KIMMTRAK	Unresectable or metastatic uveal melanoma	Competition in Uveal Melanoma	PRAME
ALNY	AMVUTTRA	hereditary ATTR amyloidosis with polyneuropathy (hATTR-PN)	CoM patents 2029-2036	Nucresiran
SAGE	ZURZUVAE	Postpartum depression (PPD)	U.S. IP expiration in 2034	Success with CNS pipeline diversification
LEGN	CARVYKTI	Multiple myeloma	Share shift to competition from anito-cel and BCMA bispecific antibodies	Continued strong uptake in the 2L+ setting for Carvykti, pipeline diversification
BPMC	AYVAKIT	Systemic mastocytosis (SM) and PDGFRA-driven gastrointestinal stromal tumors	CoM patent approx. 2034	Potential commercialization of next-gen elenestib
RYTM	IMCIVREE	Bardet-Biedl syndrome, POMC, PCSK1, or LEPR deficiency	CoM patent extension to 2032	Lifecycle management with bivamelagon/RM-718
ARQT	ZORYVE	Plaque psoriasis and atopic dermatitis, seborrheic dermatitis	Threat of IP litigation with Padagis (or other third-party)	Continued strong uptake for Zoryve, including in the primary care setting

Here we consider key risk events to main revenue drivers of our commercial names together with the potential offset features.



4 Introducing Our 4 Lenses for Commercial Stage SMID Cap Biotech Coverage (2025E-2030E)

Lens 1 Balanced Growers: Lesser dependence on both one product & the pipeline

ALNY, ARQT, ONC, GMAB, ACAD, NBIX

Lens 2 One Product Hits: ~90% growth driven by one product that has already launched

ASND, RYTM, APLS, BPMC, SAGE, ARGX, LEGN, SRPT

Lens 3 Pipeline dependent growers: Growth largely driven by yet-to-be-launched products

AXSM, RARE, IONS, EXEL, MIRM, BMRN

Lens 4 Slower growers: Lowest growth to 2030 within our commercial stage coverage

JAZZ, HALO, INCY

Lens 1 to 4 in order of increasing risk. Within each Lens, listed L to R from highest to lowest revenue growth.

Green = OW rated

MS Commercial Stage SMID Biotech Revenue Outlook (\$mn), Growth Rank & Assigned Investment Lens

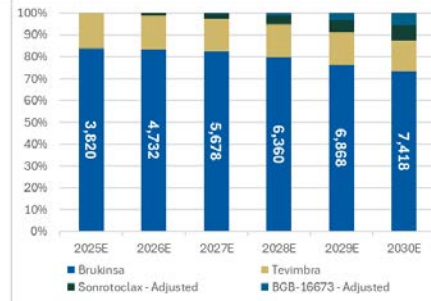
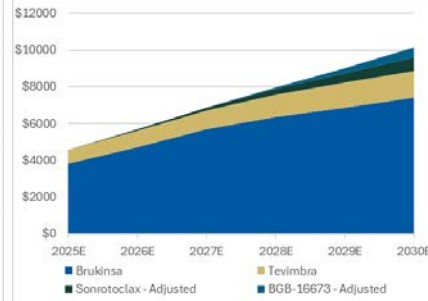
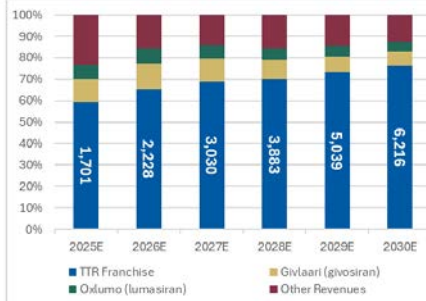
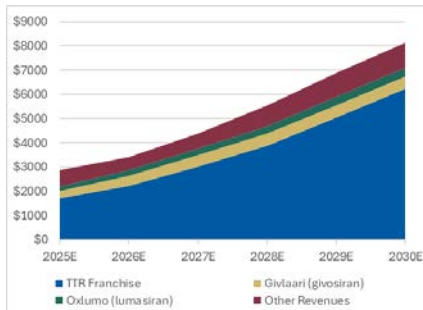
Ticker	2025E	2026E	2027E	2028E	2029E	2030E	Rev. differential 2025E to 20230E	Growth 2025E to 2030E	Growth Rank	Investment Lens
ASND	637	1,155	1,870	2,640	3,265	3,552	2,915	413%	1	2
RYTM	183	292	429	582	752	943	760	310%	2	2
APLS	127	178	289	429	512	596	468	302%	3	2
AXSM	529	941	1,374	1,737	2,096	2,377	1,848	296%	4	3
RARE	652	990	1,508	2,088	2,509	2,702	2,050	285%	5	3
LEGN	989	1,677	2,113	2,788	3,262	3,728	2,739	230%	6	2
ALNY	2,865	3,411	4,389	5,558	6,886	8,135	5,271	140%	7	1
BPMC	718	955	1,237	1,497	1,724	1,950	1,232	140%	8	2
IONS	743	805	1,082	1,285	1,659	2,102	1,360	123%	9	3
ARQT	324	412	516	612	689	726	402	112%	10	1
YMAB	80	95	113	133	156	176	96	95%	11	2
ONC	5,172	6,318	7,553	8,678	9,774	10,937	5,765	89%	12	1
GMAB	23,836	28,886	34,563	38,799	44,916	44,544	20,709	88%	13	1
MIRM	443	514	599	719	821	911	468	85%	14	3
SAGE	85	132	154	173	159	176	90	87%	15	2
ARGX	3,728	4,693	5,575	6,362	6,800	7,265	3,537	82%	16	2
EXEL	2,285	2,602	3,100	3,586	3,920	3,554	1,269	72%	17	3
IMCR	368	386	485	529	583	634	266	58%	18	2
ACAD	1,067	1,191	1,347	1,469	1,588	1,713	646	49%	19	1
BMRN	3,131	3,660	3,920	4,133	4,386	4,617	1,486	40%	20	3
NBIX	2,647	3,056	3,417	3,752	3,475	3,838	1,191	31%	21	2
SRPT	2,677	3,021	3,505	3,462	3,464	3,184	507	29%	22	2
JAZZ	4,001	4,381	4,738	4,599	4,780	4,738	737	19%	23	4
HALO	1,290	1,219	1,345	1,460	1,464	1,326	37	14%	24	4
INCY	4,297	4,564	4,814	3,514	2,599	2,500	(1,797)	-40%	25	4

Source: Morgan Stanley Research, Visible Alpha.



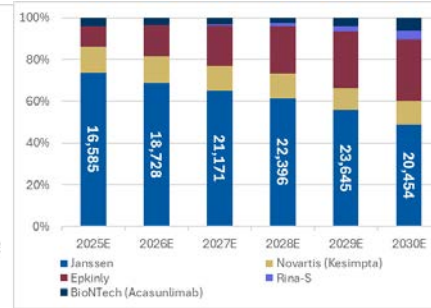
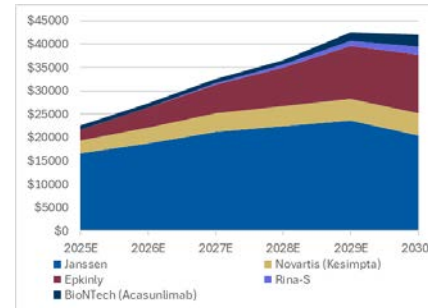
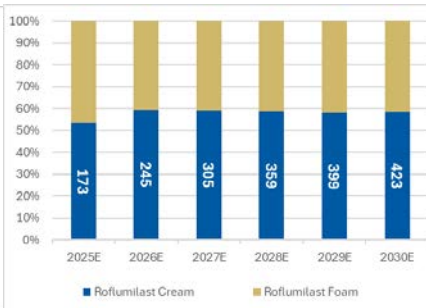
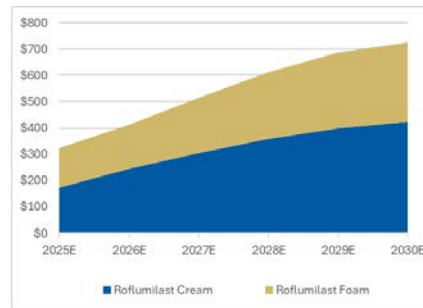
Lens
1

Balanced Growers: ALNY, ARQT, ONC, GMAB, ACAD, NBIX



ALNY (EW, PT \$287, Close \$301): Bullish on TRR franchise though other revenue provide a cushion. No looming “Pseudo LOE” event.

ONC (OW, PT \$313, Close \$256): Brukinsa carries growth but pipeline estimates appear conservative. Potential “Pseudo LOE” event via IRA in 2029 at earliest.



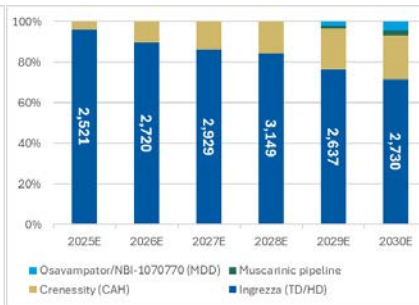
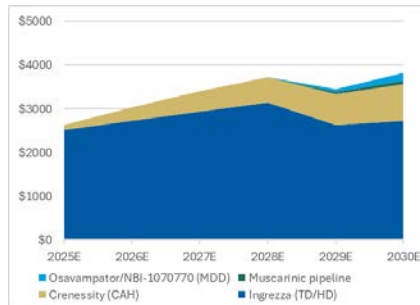
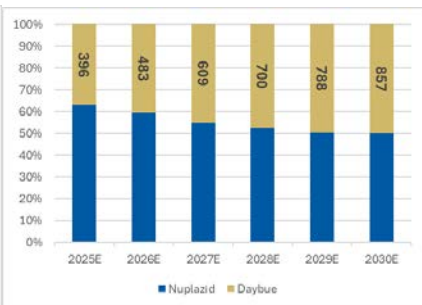
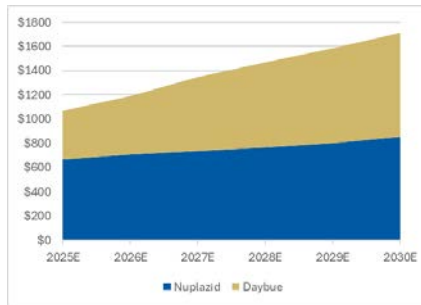
ARQT (OW, PT \$19, Close \$14): Relatively even growth that cushions risk. No looming “Pseudo LOE” event

GMAB (EW, PT \$25, Close \$22): Good growth but muted by Darazalex LOE



Lens
1

Balanced Growers (continued): ALNY, ARQT, ONC, GMAB, ACAD, NBIX



ACAD (EW, PT \$24, Close \$22): Balanced growth but pipeline still to be recognized. Nuplazid potential IRA 2029.

NBIX (OW, PT \$148, Close \$125): Crenessity could be underestimated. Potential "Pseudo LOE" event via IRA in 2029 post small biotech exemption expiry.

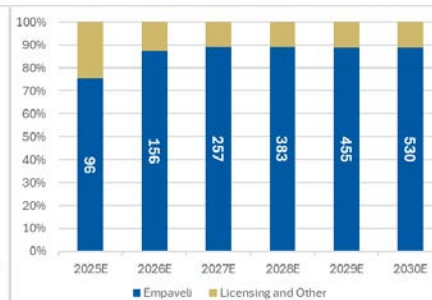
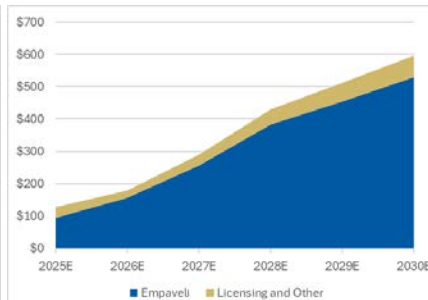
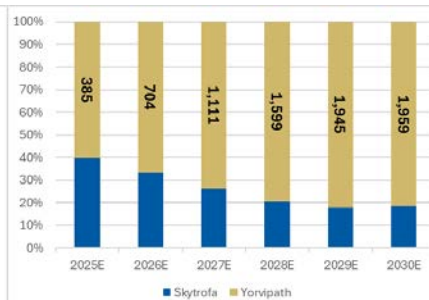
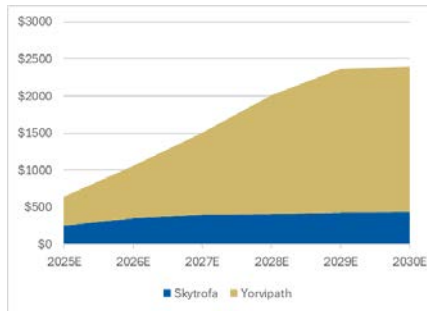
For Lens 1 companies to move from SMID Cap to Big Cap: Blockbuster potential needs to be realized from currently under-appreciated pipelines. Stocks' price appreciation is likely upon recognition of R&D efforts. Near-term, balanced growth & balance sheet provide decent risk management. Stocks to watch are ACAD & ONC due to pending R&D days June 25th & June 26th respectively.

For Lens 2 companies to move from SMID Cap to Big Cap: ARGX has shown Lens 2 companies can become relatively large in their SMID universe as new indications are found for their drug. There may be similar expectations over time for ASND/Yorvipath given its growth trajectory. However, there is a clear need for pipeline build out which could mean transition to Big Cap may take longer.



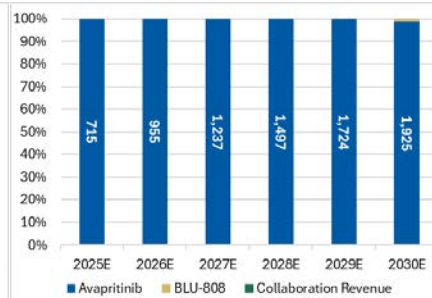
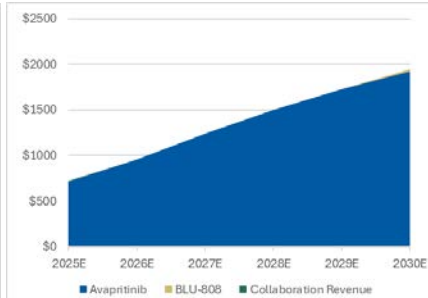
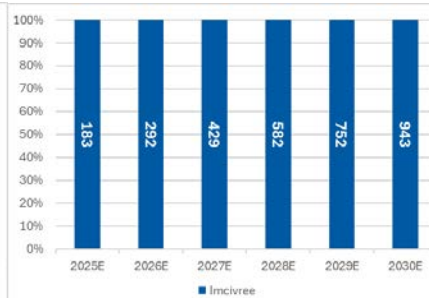
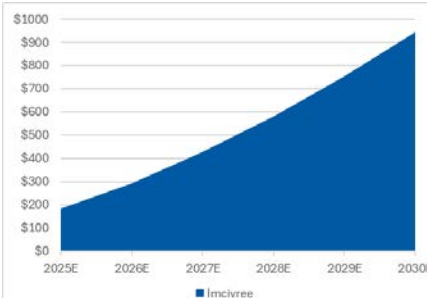
Lens
2

One Product Hits: ASND, RYTM, APLS, BPMC, SAGE, ARGX, LEGN, SRPT



ASND (OW, PT \$250, Close \$173): Strong Yorvipath launch with potential competition from AstraZeneca & MBX Biosciences.

APLS (EW, PT \$25, Close \$19): CoM patent approx. 2035 incl. assumed customary extensions.



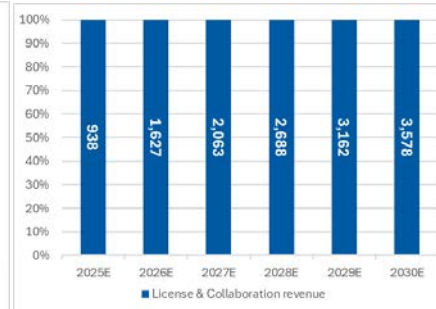
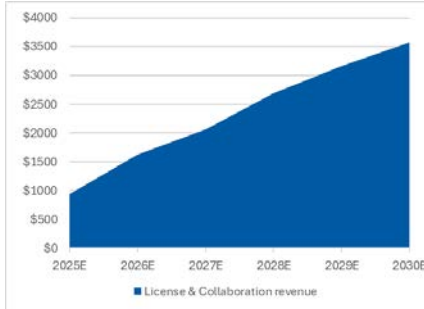
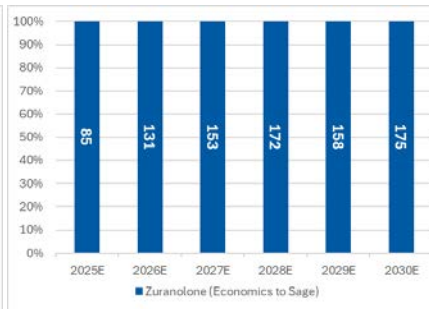
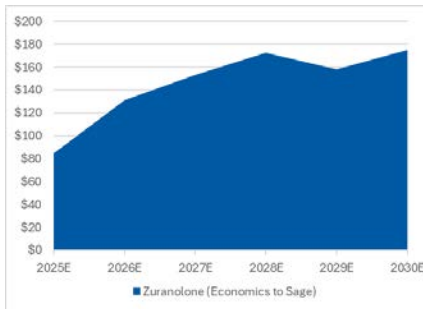
RYTM (OW, PT \$80, Close \$68): Potential label expansion in hypothalamic obesity (HO), which more than doubles the market opportunity

BPMC (EW, PT \$129, Close \$128): With the recent announcement that Sanofi intends to acquire Blueprint, we see balanced risk/reward in BPMC shares.



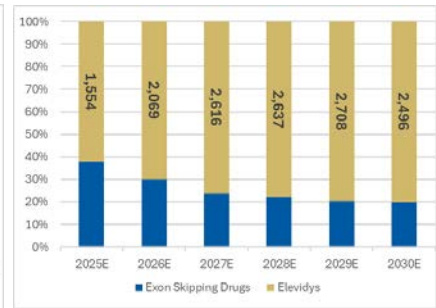
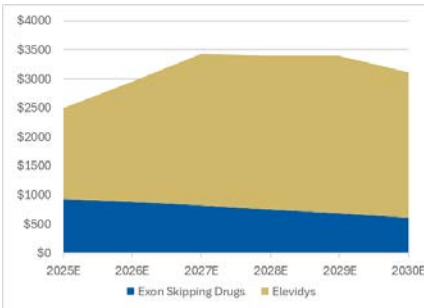
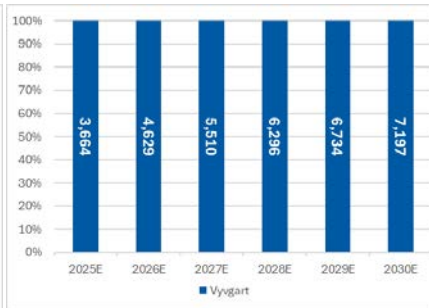
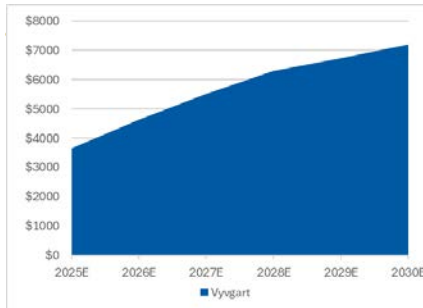
Lens
2

One Product Hits (continued): **ASND**, **RYTM**, **APLS**, **BPMC**, **SAGE**, **ARGX**, **LEGN**, **SRPT**



SAGE (EW, PT \$9, Close \$7): U.S. IP expiration in 2034. We await additional data to better understand long-term potential for Zurzuva

LEGN (OW, PT \$80, Close \$35): Continued strong uptake in the 2L+ setting for Carvykti, pipeline diversification.



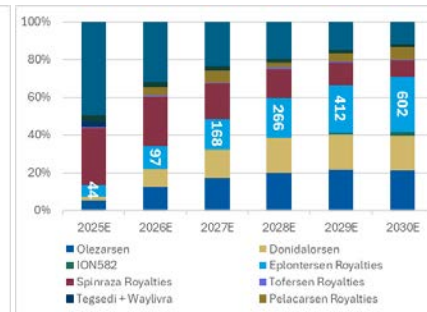
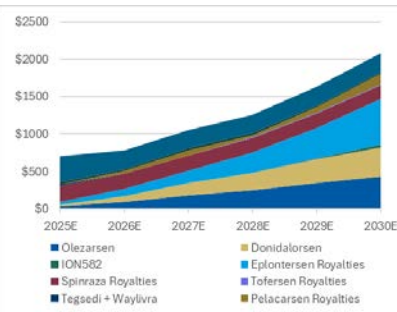
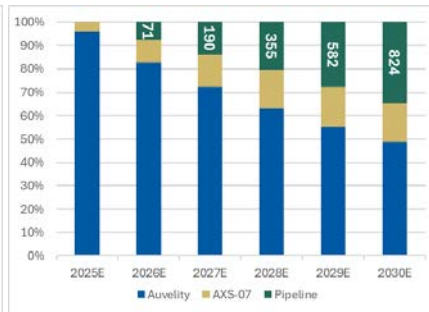
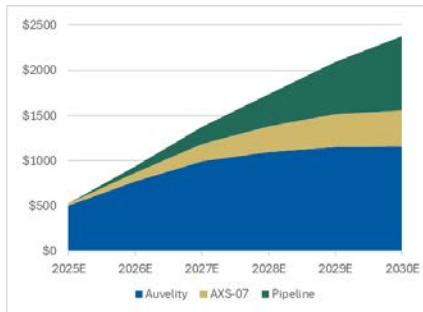
ARGX (OW, PT \$750, Close \$586): Continued growth of MG, success with CIDP, and next-gen FcRn agent ARGX-213.

SRPT (OW, PT \$113, Close \$43): We are Overweight based on the potential of Elevidys, which we believe is underappreciated.



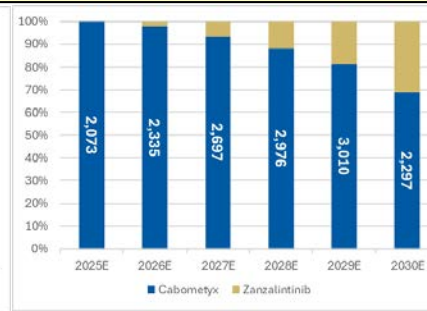
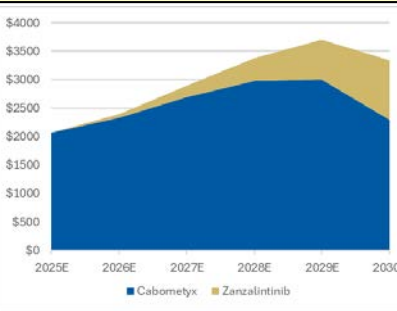
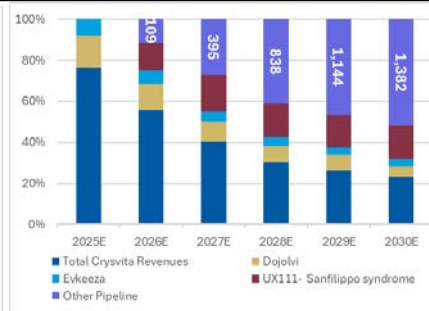
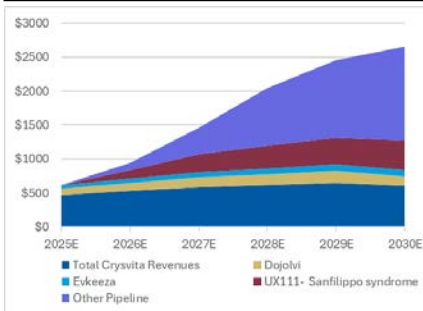
Lens
3

Pipeline dependent growers: **AXSM**, **RARE**, **IONS**, **EXEL**, **MIRM**, **BMRN**



AXSM (OW, PT \$190, Close \$112): Growth underpinned by Auvelity/ASX-07. Acceleration depends upon pipeline – AXS-05 in ADA & AXS-12 in Narcolepsy.

IONS (EW, PT \$52, Close \$35): Company's strategy transitions to driving commercial revenues though independent launches.



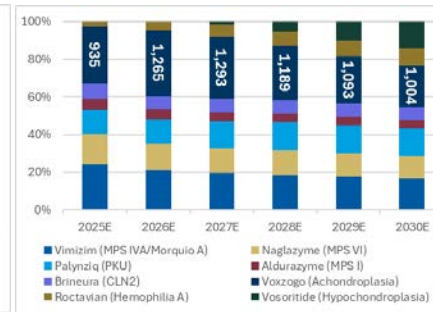
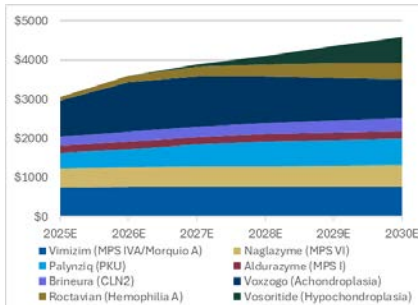
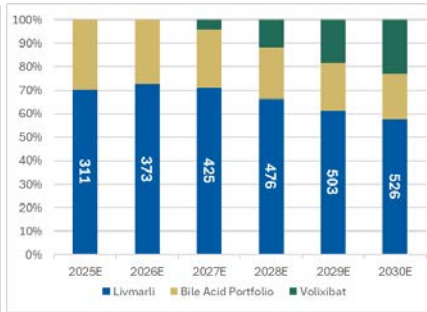
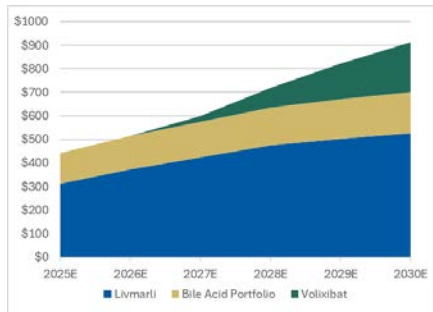
RARE (OW, PT \$65, Close \$37): Heavy pipeline reliance. UX143 (Osteogenesis Imperfecta), DTX401 (GSD1a), DTX301 (OTC Deficiency), GTX-102 (Angelman)

EXEL (OW, PT \$47, Close \$43): Cabo LOE approached so Zanza launch critical to sustain value.



Lens
3

Pipeline dependent growers (continued): **AXSM**, **RARE**, **IONS**, **EXEL**, **MIRM**, **BMRN**



MIRM (OW, PT \$70, Close \$47): Key pipeline asset, volixibat, potential for expansion into adult liver diseases (PSC and PBC).

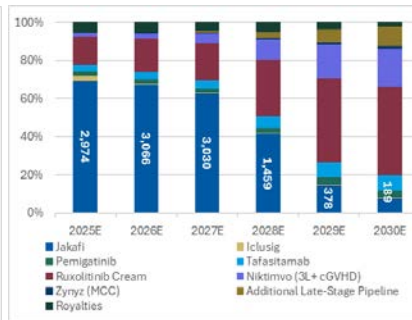
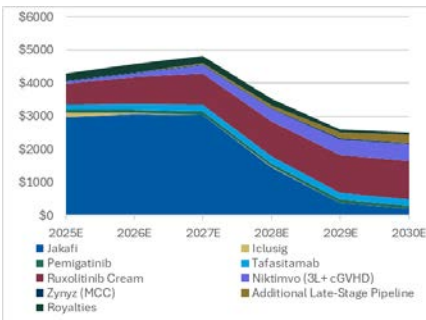
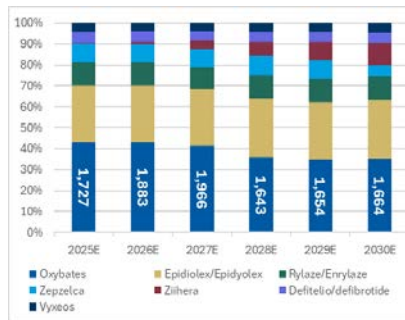
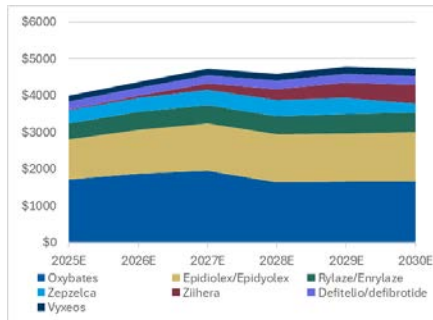
BMRN (OW, PT \$105, Close \$57): Longer-term growth apparent upon Vosoritide in Hypochondroplasia.

For Lens 3 companies to move from SMID Cap to Big Cap: Pipeline expansions are more obvious to Street here, as is pending revenue diversification. However, successful launches are needed and many of such do not occur until the latter part of this decade.



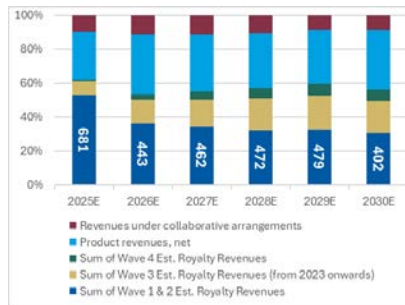
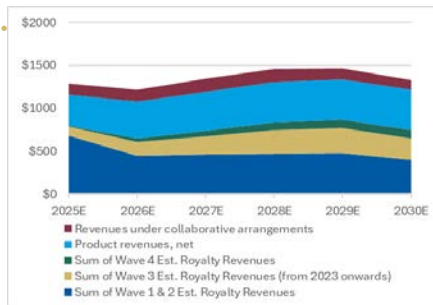
Lens
4

Lower growers: JAZZ, HALO, INCY



JAZZ (OW, PT \$166, Close \$111): Growth stymied by outlook for oxybates and potential impact of orexin-2 agonists.

INCY (EW, PT \$68, Close \$69): The key consideration facing INCY is the company's ability to bridge and grow through the anticipated LOE for Jakafi.



HALO (EW, PT \$62, Close \$54): We risk-adjust royalties via a 40% probability of success to reflect potential for CMS price discounting. Growth expectations could rebound sharply should CMS play out more favorably.

For Lens 4 companies to move from SMID Cap to Big Cap: Here a combination of business development and pipeline building is required to achieve above peer group growth. Although note our forecast growth for HALO is currently handicapped due to the CMS draft guidance which may change.

Biotech Beat: KOL Series – SMID Cap In Focus

Upcoming Webcasts



Speaker: Dr. Alex Reyentovich ([Bio](#))
Topic: Treatment of heart failure and other advanced cardiac diseases
Date: July 9th 2025 (1:00pm ET)
[Webcast Registration Link](#)

Past Webcasts



Speaker: Dr. Partha Shekhar Ghosh ([Bio](#))
Topic: Treatment of Duchene Muscular Dystrophy
Date: June 12th 2025 (10:30am ET)
[Webcast Registration Link](#)



Speaker: Dr. Norman Latov ([Bio](#))
Topic: Treatment of MG / CIDP
Date: June 10th 2025 (11:00am ET)
[Webcast Link](#)



Speaker: Dr. Andrew Yee ([Bio](#))
Topic: Treatment of Multiple Myeloma (LEGN & ACLX)
Date: June 6th 2025 (1:00pm ET)
[Webcast Link](#)

How We Got Here & The Map Out... (Week Of June 9th , 2025)

How Did We Get Here?

April 1st 2025: Mass Layoffs at the FDA and a reduction in force of ~3500 across the department of health and human services



April 9th – Trump Announces
90 days **Pause** On Tariffs



April 14th – Executive order
on Drug Pricing



April 22nd – Policy for international
reference pricing



Trump looking at cutting US drug prices to international levels, sources say

By Patrick Wingrove

April 22, 2025 3:58 PM EDT | Updated 12 min ago



What could lead us to the path out of here?

- Rate cuts
- FDA meeting timelines
- Return of sector M&A
- Positive reaction to stock catalysts

What could take us off the path out of here?

- Inflation Data / No Rate Cuts
- Tariffs on Pharma
- FDA shifting goal posts for standards of drug approval

What Is The Map Out?

July 8th 2025 – Expiration Of 90 Day Pause
On Tariffs



May 6th / 7th 2025 – Unsurprisingly, the Fed left rates unchanged at its May FOMC meeting, as the impact of tariffs on its dual mandate has yet to be determined. The **next FOMC meeting will take place on June 17-18**, at which point we may have a better sense on the state of the economy and when/if the Fed can provide rate relief



April 30th 2025 – Though March PCE Core inflation came in softer than expected, a strong April jobs reports, in conjunction with uncertainty about the impact of tariffs on, both, inflation and economic growth suggests to us that rate relief is unlikely at the May FOMC meeting and we will need to wait for addl. economic data post “Liberation Day”.



Morgan Stanley

Our Analysis & Views Regarding FDA Changes

5 Viewpoints From Ex-FDA Officials

Former FDA Regulatory Project Manager

Our expert highlighted 1) PDUFA reauthorization, 2) end of Phase 2 meetings, and 3) international collaboration as key areas. With a majority of the negotiation group laid off, our expert saw a risk to the user fee program reauthorization. In addition, how the FDA responds to end of Phase 2 meetings will be important as well as watching for implications on international collaboration (i.e. ICH guidance documents).

While our expert has not observed slippage with near-term PDUFA dates yet, the first stress test for the FDA may be more evident with future timelines. From their experience, CDER would know if a drug would be approved halfway through the review (around 6 months for a standard review and 4 months for accelerated approval). With CBER requiring a more complex review, it can take longer to come to an approval decision.

Read more: [Assessing the Impact of the FDA Cuts](#)

Former FDA Policy Affairs Official

They highlighted a potential shift in advisory committee meetings... Our expert emphasized the greater concerted effort to limit industry participation that could include a transition to focus more on neutral/independent scientific advisors. Their largest question is how much independence the agency will maintain in terms of decision making.

...as well as accelerated approvals and initiatives under the current administration. Our expert pointed at the position of the new appointees on the accelerated approval pathway and does not think that the guidelines implemented last year requiring sponsors to initiate post-approval confirmatory trials will be viewed as sufficient.



5 Key Takeaways from FDA Cell & Gene Therapy Roundtable ([Link](#))

FDA supportive of cell and gene therapy

- Willingness to listen to and partner with innovators to facilitate the regulatory process and improve efficiencies
- Continue to leverage priority review and accelerated approval pathways particularly in areas of rare disease where more flexibility is warranted
- Highlighted past success and desire for transformational/curative therapies, with positive comments on incremental steps forward as well, which add up over time

Key themes highlighted by panel

- FDA expressed openness to themes/suggestions, with many already being on radar
- Potential negotiations between the FDA and local IRBs to ensure studies are initiated in the US and not overseas
- Devoting attention to pediatric and rare diseases, which they see as neglected
- Need for regulatory flexibility, particularly in rare diseases where the unmet need tends to be high, and indicated some studies may not need a control arm
- Focus on learning from experiences of other filers and looking into ways to make redacted documents available publicly to further optimize the process

Though recent changes at the FDA have created near-term uncertainty and concerns among investors, we believe positive and supportive cadence from FDA leadership could help remove regulatory overhang for the biotech sector.

5 Cycle #2: FDA Corporate Survey – SMID Cap Biotech Coverage

We surveyed companies in our coverage **again** & received **18 responses**...we interpreted the backing data in a blinded fashion. Here are the results:

Question 1

Do you anticipate recent changes at FDA will impact your near- and/or medium-term interactions with the agency and to what extent?

Positive	4	22%
Neutral	14	78%
Negative	-	-

Sentiment Check

Bullish: Maintain ongoing interactions with the FDA, and they have shown responsiveness and active involvement in our discussions.

Neutral: No change to interactions.

Bearish: We received no negative responses this time. Last survey there was an expectation that reductions in experienced clinical leaders and support staff will hinder reviewers' and inspectors' ability to carry out essential duties.

Question 2

Which areas of your business do you expect will be impacted most?

No Change	62%
In Dialogue w/ FDA	13%
Filing / PDUFA Timeline	12%
Break-Through	5%
Too Early To Say	8%

Sentiment Check

Bullish: More respondents expect no change: There are still no signs of disruptions at the FDA. Respondents remain hopeful that the Agency will continue its normal activities, the situation requires further observation.

Neutral: No change to interactions.

Bearish: Last survey - the recent restructuring may see the FDA producing fewer guidance documents and regulations. Given that the industry depends heavily on these FDA policies, a notable decline could negatively impact long-term drug development efforts.

Question 3

Is there any further commentary on this topic that we didn't ask about but should consider?

Sentiment Check

- Bullish:**
- Although the FDA's reorganization may cause delays industry wide, we think their focus on fast-track treatments remains unchanged...
 - Confident the agency (FDA) will continue to do what is in the best interest of patients and science.

Neutral: Nothing more to consider.

Bearish:

- The FDA's ability to perform its duties will likely be compromised.
- The primary FDA macro issue revolves around whether RFKs disruptive influence will continue to undermine decades of progress in modernizing the agency's drug development and review processes. A critical factor is whether Commissioner Makary can establish and execute a proactive, innovative strategy to address operational challenges and drive meaningful reform.

Question 4

Finally, are there broader macroeconomics considerations that you anticipate could impact your business in 2025?

Funding - Company Specific	4%
Operational	11%
Tariffs	32%
Drug Pricing	7%
Industry Funding	7%
No Impact	39%

Sentiment Check

Bullish: We've fielded several inquiries about tariffs. Thanks to our diversified global supply chains, we're positioned to navigate the current volatility. Since material costs represent only a fraction of total expenses the effect on our margins would be negligible.

Neutral: No change expected.

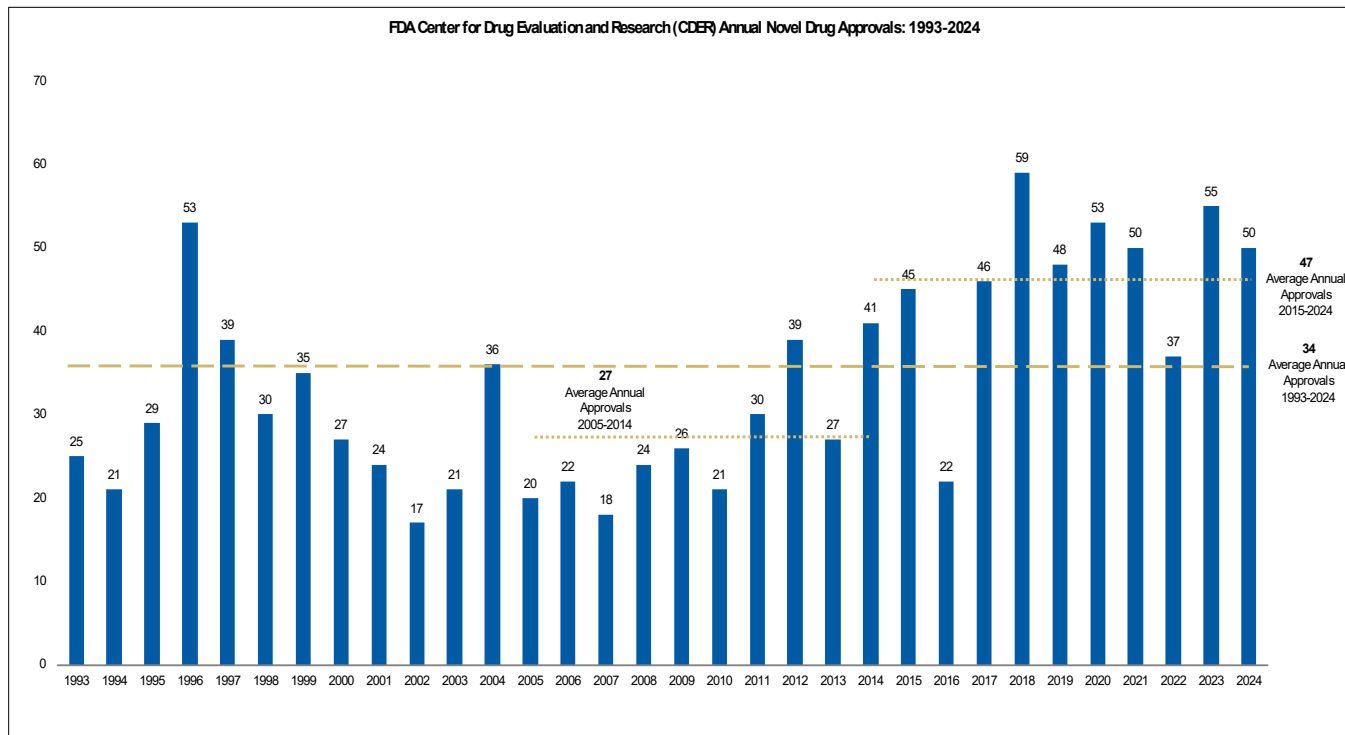
Bearish: We're keeping a close watch on macroeconomic factors like tariffs, as they may influence the industry's ability to secure funding



6 FDA Approval Timeline Tracker – SMID Cap Coverage (2025/2026)

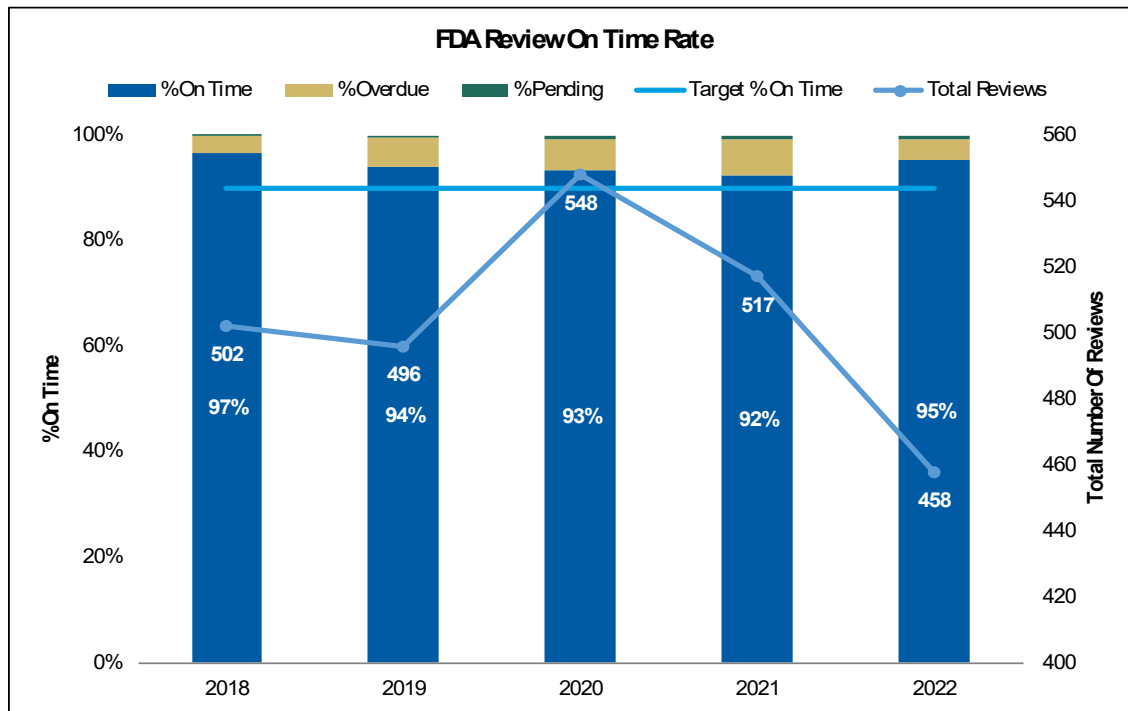
Company	Ticker	Drug	Indication	PDUFA date (if known)	Application (NDA or BLA)	Status (FTD or BTD)	Review Classification (Standard, Priority Orphan)	Accelerated Approval?	First in Class / Best in Class?	Status
Argenx	ARGX	Vyvgart PFS	CIDP & MG	4/10/2025	--	--	--	--	First in class	Ontime
Arcutis	ARQT	Zoryve foam	Scalp & body psoriasis	5/22/2025	sNDA	--	Standard	--	--	Ontime
BeiGene	ONC	tarlatamab	2L SCLC	Anticipated filing (topline data 1H25)	sBLA	--	--	--	--	Pending
Jazz Pharmaceuticals	JAZZ	Zeptelca	1L ES-SCLC	Planned filing submission in 1H25	sNDA	--	--	--	--	Pending
Ascendis	ASND	TransCon HGH	Adult GHD	7/27/2025	sBLA	--	Orphan	--	--	Pending
Apellis	APLS	Empaveil	C3G and IC-MPGN	7/28/2025	sNDA	--	Priority	--	Best in class	Pending
PTC Therapeutics	PTCT	sepiapterin	pediatric and adult phenylketonuria	7/29/2025	NDA	--	Standard	--	--	Pending
Insmid	INSM	brensocatib	bronchiectasis	8/12/2025	--	--	--	--	--	Pending
Jazz Pharmaceuticals	JAZZ	dordaviprone	recurrent H3 K27M-mutant diffuse glioma	8/18/2025	NDA	FTD	Priority	Yes	First in class	Pending
Ultragenyx	RARE	UX111	MPS IIIA	8/18/2025	--	--	--	--	--	Pending
PTC Therapeutics	PTCT	vatiquinone	Friedreich's ataxia	8/19/2025	NDA	--	Priority	--	First in class	Pending
Ionis	IONS	Donidalorsen	HAE	8/21/2025	NDA	--	Orphan	--	--	Pending
Biohaven	BHVN	Trofluzole	Small Molecule	8/22/2025	NDA	--	Priority	--	--	Pending
Ionis	IONS	High Dose Spinraza	SMA	9/22/2025	sNDA	FTD	--	--	--	Pending
Crinetics	CRNX	paltusotine	acromegaly and neuroendocrine tumors	9/25/2025	--	--	--	--	--	Pending
Cytokinetics	CYTK	aficanten	obstructive hypertrophic cardiomyopathy (HCM)	9/26/2025	--	--	--	--	--	Pending
Rhythm Pharmaceuticals	RYTM	Setmelanotide	hypothalamic obesity	sNDA filing 3Q25	sNDA	BTB	--	--	First in class	Pending
Arcutis	ARQT	Zoryve cream	Atopic dermatitis (AD) patients ages 2-5	10/13/2025	sNDA	--	Standard	--	--	Pending
Cullinan Therapeutics	CGEM	zipalertinib	2L+ EGFR ex20ins NSCLC	Planned filing 2H25	NDA	BTB	--	--	Best in class	Pending
CG Oncology	CGON	cretostimogene	HR BCG-unresponsive NMIBC	Planned filing 2H25	BLA	FTD/BTD	--	--	Best in class	Pending
REGENXBIO	RGNX	RGX-121	MPS II	4Q25	BLA	FTD	Priority	Yes	First in class	Pending
Arrowhead	ARWR	Plozasiran	FCS	11/18/2025	NDA	FTD/BTD	Orphan	--	Best in class	Pending
Ascendis	ASND	TransCon CNP	Achondroplasia	11/30/2025	NDA	--	Priority	--	--	Pending
Denali Therapeutics	DNL1	tividenofusp alfa	MPS II	Filing initiated	BLA	FTD/BTD	--	--	Best in class	Ontime
Alector	ALEC	latozinemab	FTD-GRN	Anticipated filing (topline data 4Q25)	BLA	FTD/BTD	--	--	First in class	Pending
Exelixis	EXEL	zanalantinib	CRC	Anticipated filing (topline data 2H25)	NDA	--	--	--	--	Pending
Exelixis	EXEL	cabozantinib	mCRPC	Potential filing (plan to evaluate in 2025)	sNDA	--	--	--	--	Pending
IO Biotech	IOBT	Cytembio + pembrolizumab	Advanced melanoma	BLA by YE25, potential approval in 2026	BLA	BTB	--	--	First in class	Pending
Jazz Pharmaceuticals/BeiGene	JAZZ/ONC	Zihera + Tevimbra	GEA	Anticipated filing (topline data 2H25)	sBLA	FTD	--	--	Best in class	Pending
Sarepta Therapeutics	SRPT	SRP-9003	LGMD2E/R4	BLA filing before YE25	BLA	BTB	Orphan	--	First in class	Pending
Rocket Pharmaceuticals	RCKT	KRESLADI	Severe LAD-I	Complete BLA submission in 2025	BLA	FTD	Orphan	--	First in class	Pending
Rocket Pharmaceuticals	RCKT	RP-L102	Fanconi Anemia	BLA submission completes in 2025	BLA	FTD	Orphan	--	First in class	Pending
Incyte	INCY	Ruxolitinib Cream	Pediatric AD	Approval Anticipated 2H25	sNDA	--	--	--	--	Pending
Incyte	INCY	Retifanlimab	SCAC	Approval Anticipated 2H25	sBLA	--	--	--	First in class	Ontime
Incyte	INCY	Tafasitamab	FL	Approval Anticipated 2H25	sBLA	--	--	--	--	Pending
BioMarin	BMRN	Palynziq	Adolescents with PKU	Regulatory filings in 2025	--	--	Orphan	--	--	Pending
Incyte	INCY	Ruxolitinib XR	MF, PV, and GVHD	Submission to FDA planned by YE25	NDA	--	--	--	--	Pending
Incyte	INCY	Povorcitinib	HS	NDA anticipated YE25 or early 2026	NDA	--	--	--	First in class	Pending
Axsome	AXSM	AXS-05	ADA	sNDA submission 3Q25	sNDA	BTB	--	--	First in class	Pending
Axsome	AXSM	AXS-12	Narcolepsy w/ cataplexy	NDA submission 2H25	NDA	BTB	--	--	--	Pending
Disc Medicine	IRON	Bitopertin	EPP	NDA submission 2H25 (AA)	NDA	--	Orphan	Yes	First in class	Pending
Ionis	IONS	Olezarsen	severe hypertriglyceridemia	PDUFA 2026	sNDA	--	--	--	First in class	Pending
Kyverna Therapeutics	KYTX	KYV-101	SPS	BLA filing 2026	BLA	--	--	--	First in class	Pending
Acadia Pharmaceuticals	ACAD	ACP-101	PWS	Anticipated filing (topline data 1H26)	NDA	FTD	--	--	--	Pending
Dyne Therapeutics	DYN	DYNE-101	DM1	BLA filing 1H26	BLA	FTD	Orphan	--	First in class	Pending
Dyne Therapeutics	DYN	DYNE-251	DMD	BLA filing early 2026	BLA	FTD	Orphan	--	Best in class	Pending

⑥ FDA Approval Tracker – 2019 similar to 2024 but fewer staff



Drugs advance through several "phases" of clinical development before they reach the FDA for an approval decision. While it is fairly straightforward to track the number of approved drugs by company (i.e., the numerator), it is more challenging to measure the number of drugs a company advances into clinical development (i.e., the denominator). We leveraged data available on the clinicaltrials.gov website to count the number of drugs each of our large cap companies advanced into clinical development (2007+)

⑥ Tracking Impact To Review Timelines – Examining the benchmark



The data included in the analysis includes the following review/filing types: 1) Class 1 resubmitted NDA and BLA efficacy supplements 2) Class 2 resubmitted NDA and BLA efficacy supplements 3) Class 1 resubmitted NDAs and BLAs 4) Class 2 resubmitted NDAs and BLAs 5) Original Priority NMEs and BLAs 6) Original Priority Non-NME NDAs 7) Original Standard NMEs and BLAs 8) Original Standard Non-NME NDAs 9) Priority NDA and BLA Efficacy Supplements & 10) Standard NDA and BLA Efficacy Supplements

Key Commentary:

FDA has historically set a benchmark of completing 90% of drug reviews by target action dates

From 2018-2022 (the last year for which we have complete data) the agency appears to have met the 90% benchmark, including during years such as 2020 when there was a greater number of applications

What does this mean?

- The FDA has successfully handled large numbers of drug reviews over many years and met its 90% target, including 2020-2022 when resources were constrained by the COVID-19 pandemic, thereby demonstrating its resilience to handle large workloads in the face of challenging environments.
- As DOGE may represent a new challenge for the agency, we are paying attention to how the FDA prioritizes resources and what it could mean for drug review timelines going forward. We are therefore tracking recent and upcoming PDUFA/BSUFA dates for drug candidates from public companies (next slide) to gauge performance to measure the impact of DOGE.
- We note that prior to the cuts FDA headcount was estimated at 19,700; following a 3,500 reduction in force, headcount would fall to 16,200, which is 5-10% below pre-COVID headcount of 17,000-18,000 individuals.



6 FDA Decision Tracker - Since Trump Inauguration mostly on time

Company Name	Drug	Filing	Event	Event Target Date	Event Outcome
Biogen	Lecanemab	sBLA	FDA decision on lecanemab for IV maintenance dosing for the treatment of early Alzheimer's disease	1/25/2025	Approved
Vertex	Suzetrigine	NDA	FDA decision on suzetrigine for the treatment of moderate-to-severe acute pain	1/30/2025	Approved
Axsome	AXS-07	Resubmitted NDA	FDA decision on AXS-07 for the acute treatment of migraine	1/31/2025	Approved
Supernus	SPN-830	Resubmitted NDA	FDA decision on SPN-830 for continuous treatment of motor fluctuations in Parkinson's disease	2/1/2025	Approved
Lundbeck	Brexipirazole	sNDA	FDA decision on Brexipirazole in combination with Sertraline for the treatment of adults with PTSD	2/8/2025	Delayed
GSK	MenABCWY	BLA	FDA decision on 5-in-1 MenABCWY vaccine candidate	2/14/2025	Approved
Ono	Vimseltinib	NDA	FDA decision on Vimseltinib for treatment of tenosynovial giant cell tumor	2/17/2025	Approved
Novartis	Fabhalta	sNDA	FDA decision on Fabhalta for the treatment of adults with complement 3 glomerulopathy	2/24/2025	Approved
SpringWorks	Mirdametnib	NDA	FDA decision of Mirdametnib for the treatment of NF1-PN	2/28/2025	Approved
ARS Pharma	Neffy 1 mg	sNDA	FDA decision on neffy 1 mg for the treatment of Type I allergic reactions	3/6/2025	Approved
Scienture	SCN-102	Resubmitted NDA	FDA decision on SCN-102 for the treatment of hypertension	3/17/2025	Approved
Relay	Rivoceranib	NDA	FDA decision on Rivoceranib in combination with Camrelizumab as a therapy for advanced or metastati	3/20/2025	CRL Issued
Alnylam	Amvuttra	sNDA	FDA decision on Vutrisiran for the treatment of ATTR amyloidosis with cardiomyopathy	3/23/2025	Approved
GSK	Gepotidacin	NDA	FDA decision on Gepotidacin for the treatment of female adults and adolescents with uncomplicated u	3/26/2025	Approved
Soleno	DCCR	NDA	FDA decision on DCCR for the treatment of Prader-Willi syndrome with hyperphagia.	3/27/2025	Approved
Milestone Pharma	Cardamyst	NDA	FDA decision on Cardamyst nasal spray for the management of PSVT	3/27/2025	CRL Issued
Mirum	Chenodiol	NDA	FDA decision on Chenodiol for the treatment of cerebrotendinous xanthomatosis	3/28/2025	Approved
Sanofi	Fitusiran	NDA	FDA decision on Fitusiran for the treatment of hemophilia A or B in adults and adolescents with or with	3/28/2025	Approved
Novavax	Nuvaxovid	BLA	FDA decision on Novavax's Covid-19 Vaccine	4/1/2025	Approved with limited label
Aldeyra	Reproxalap	NDA	FDA decision on Reproxalap for the treatment of the signs and symptoms of dry eye disease	4/2/2025	CRL Issued
Amgen	Uplizna	sBLA	FDA decision on Uplizna for the treatment of Immunoglobulin G4-related disease	4/3/2025	Approved
Exelixis	Cabometyx	sNDA	FDA decision on Cabometyx for expanded use in the treatment of advanced neuroendocrine tumors	4/3/2025	Approved
Novartis	Atrasentan	NDA	FDA accelerated approval for Vanrafia® (atrasentan), the first and only selective endothelin A receptor	-	Approved
Ocular Therapeutics	Dextenza	sNDA	FDA decision on Dextenza for ocular inflammation and pain after ophthalmic surgery and ocular itching a	-	Approved
Bristol-Myers Squibb	Opdivo plus Yervoy	sBLA	FDA decision on Opdivo plus Yervoy for 1L unresectable MSI-H or dMMR CRC	6/23/2025	Approved
argenx	Vyvgart SC prefilled syringe	sBLA	FDA decision on Vyvgart SC prefilled syringe for gMG and CIDP	4/10/2025	Approved
Bristol-Myers Squibb	Opdivo plus Yervoy	sBLA	FDA decision on Opdivo plus Yervoy for 1L unresectable hepatocellular carcinoma	4/21/2025	Approved
Regeneron	Dupixent	Resubmitted sBLA	FDA decision on Dupixent to treat patients with CSU not adequately controlled with H1 antihistamines	4/18/2025	Approved
Regeneron	Eylea HD	sBLA	FDA decision to potentially extend dosing intervals for EYLEA HD in wet AMD and diabetic macular ede	4/20/2025	Approved
Akeso	penpulimab-kcqx	BLA	FDA decision to approve penpulimab-kcqx for the treatment of keratinizing nasopharyngeal carcinoma	-	Approved
Abbvie	Rinvoq	sNDA	FDA decision to approve Rinvoq for giant cell arteritis	-	Approved
Stealth BioTherapeuti	Elamipretide	NDA	FDA decision on elamipretide for the treatment of Barth syndrome	4/29/2025	CRL Issued
Abeona	Pz-cel	Resubmitted BLA	FDA decision on Pz-cel for the treatment of recessive dystrophic epidermolysis bullos	4/29/2025	Approved
GSK	Nucala	sBLA	FDA decision on Nucala as an add-on maintenance treatment for patients with COPD with an eosinoph	5/7/2025	Approved
AbbVie	Emrelis	NDA	FDA decision to approve Emrelis in previously treated NSCLC with higher c-Met protein overexpression	5/14/2025	Approved
Merck	Welireg	sNDA	FDA decision on Welireg for the treatment of patients with advanced PPGL	5/26/2025	Approved
Incyte	Zynyz	BLA	FDA decision to approve Zynyz for 1L inoperable squamous cell carcinoma	5/15/2025	Approved
Arcutis	Zoryve	sNDA	FDA decision on Zoryve foam for the treatment of scalp and body psoriasis	5/22/2025	Approved
Sanofi	MenQuadfi	sBLA	FDA decision on MenQuadfi for potential extension of indication to include children aged 6-weeks to 2	5/23/2025	Approved
Liquidia	Yutrepia	Resubmitted NDA	FDA decision on Yutrepia inhalation powder to treat PAH and pulmonary hypertension associated with	5/24/2025	Approved
Eton Pharma	ET-400	NDA	FDA decision on ET-400 as an additional oral hydrocortisone treatment option	5/28/2025	Approved
Moderna	mRNA-1283	BLA	FDA decision on mRNA-1283 for the treatment of Respiratory COVID-19 vaccine	5/31/2025	Approved

6 FDA's Accelerated Approval Pathway: Updates & Implications

The FDA's accelerated approval process allows for earlier approval of drugs that treat **serious conditions and fill an unmet medical need**, based on a **surrogate endpoint** that is reasonably likely to predict clinical benefit.

Products granted accelerated approval must meet the same statutory standards for safety and effectiveness as those granted traditional approval.

As a condition of accelerated approval, the FDA generally requires sponsors to conduct additional post-approval confirmatory studies to verify and describe the product's clinical benefit.

FDA may require, as appropriate, that confirmatory trials be underway prior to approval or within a specific time period after the date of approval for a product granted accelerated approval

Ticker	Company	Asset	Detail
SRPT	Sarepta Therapeutics	SRP-9003	Currently in a PH3 study for LGMD2E/R4 and biomarker data (beta-sarcoglycan protein) are expected in 2Q25. The company plans to file a BLA for accelerated approval in 2025
DYN	Dyne Therapeutics	DYN-101 / DYN-251	(Exon 51 skipping) data from a registrational cohort of the Ph1/2 DELIVER study in DMD are expected late 2025 with regulatory filing for accelerated approval expected in early 2026. DYNE-101 data from the registrational cohort of the Ph1/2 ACHIEVE study in DM1 are expected 1H26 with regulatory filing for accelerated approval also expected in 1H26. We note drug reviews for these products fall under the CDER rather CBER.
KYTX	Kyverna Therapeutics	KYV-101	(CD19 CAR-T) registrational Ph2 data in SPS expected 1H26 with BLA filing for accelerated approval expected in 2026.
RGNX	Regenxbio Inc	RGX-202	RGNX says their DMD gene therapy (RGX-202) should have the accelerated approval pathway open for them but they have not confirmed that they would file a BLA under the accelerated pathway yet. We're still waiting on their pivotal trial which will read out next year.
PTCT	PTC Therapeutics	PTC518	Hopes that PTC518 can pursue accelerated approval, but they would have to help FDA define that pathway in Huntington's and have a Ph2 readout in Q2 that could help with this
IRON	Disc Medicine	Bitopertin	Bitopertin for EPP, for which Disc Medicine expects to submit an NDA under the accelerated approval pathway in 2H25
ONC	BeiGene Ltd.	Sonrotoclast	(BCL2 inhibitor) Planned data readouts in R/R CLL and R/R MCL Phase 2 trials and potential accelerated approval submissions in the second half of 2025
DNLI	Denali Therapeutics Inc.	DNL310	Lead asset DNL310 shows strong biomarker data for Hunter syndrome, with plans for a BLA submission and accelerated approval by Q2 2025.
JAZZ	Jazz Pharmaceuticals	Dordaviprone	A New Drug Application (NDA) for accelerated approval of dordaviprone in recurrent H3 K27M-mutant diffuse glioma was recently accepted and granted Priority Review by FDA.

January 29, 2025

- The FDA issued two new guidance documents governing details of the Accelerated Approval Program, including a focus on product withdrawal and requirements for ongoing confirmatory trials.
- The FDA solicited public comment on the Accelerated Approval Guidance until March 6, 2025, and on the Confirmatory Trial Guidance document until March 10, 2025.

Morgan Stanley

Repositioning MS Lens On SMID Cap Biotech

7 Biotech stocks with negative EV: Which stand out?

We screen our covered universe for biotech companies with low-to-negative enterprise value, i.e. companies trading below cash.

Analyst	Company	Ticker	Rating	Price Target	Market Capitalization (\$M)	FY24 YE cash (\$M)	FY24 YE debt (\$M)	Enterprise Value (\$M)	FY24 cash burn (\$M)	MSE cash runway (years)	Drug	Indication	Development Stage	Class
Flynn	C4 Therapeutics	CCCC	Equal-weight	\$1-14	\$115	\$215	\$0	(\$100)	(\$65)	3.30	CFT1946	Solid tumors	Ph1/2	
Flynn	Prime Medicine Inc	PRME	Equal-weight	\$1-7	\$192	\$144	--	\$47	(\$123)	1.17	PM359	CGD	Ph1/2	First-in-Class
Flynn	Arvinas Inc	ARVN	Equal-weight	\$11	\$553	\$954	\$1	(\$401)	(\$259)	3.68	Vepdegestrant	ER+/HER2-Breast Cancer	Ph3	
Frommer	Mural Oncology	MURA	Equal-weight	\$1-3	\$44	\$108	--	(\$64)	(\$129)	0.84	Nemvaleukin	Mucosal melanoma	Ph2	-
Frommer	ProKidney Corp	PROK	Equal-weight	\$3	\$150	\$328	--	(\$178)	(\$126)	2.60	Rilparencel	Diabetic CKD	Ph3	-
Frommer	4D Molecular Therapeutics Inc	FDMT	Underweight	\$2-6	\$208	\$321	--	(\$113)	(\$135)	2.39	4D-150	Wet AMD	Ph3	-
Frommer	Galapagos NV*	GLPG*	Underweight	\$22	\$1,513	\$3,271	\$0	(\$1,758)	*	*	GLPG5101	B-cell malignancies	Ph1/2	-
Laaman	Alector Inc	ALEC	Underweight	\$1-2	\$162	\$355	\$9	(\$183)	(\$230)	1.54	Latozinemab	FTD-GRN	Phase 3	First-in-Class
Laaman	Continuum Therapeutics	CTNM	Overweight	\$20	\$89	\$191	\$0	(\$102)	(\$33)	5.81	PIPE-791	IPF and progressive MS	Phase 2	Best-in-Class
Purohit	Lyell Immunopharma, Inc.	LYEL	Equal-weight	NA	\$144	\$301	--	(\$157)	(\$162)	1.85	IMPT-314	NHL	PhI/III	First-in-Class
Purohit	Ventyx Biosciences	VTYX	Equal-weight	\$1-5	\$177	\$229	\$0	(\$52)	(\$131)	1.75	VTX2735	Recurrent Pericarditis	PhII	First-in-class
Purohit	SAGE Therapeutics Inc	SAGE	Equal-weight	\$9	\$413	\$424	--	(\$11)	(\$267)	1.59	Zuranolone	Post-partum depression	Approved	--
Purohit	Foghorn Therapeutics	FHTX	Equal-weight	\$4	\$253	\$221	\$0	\$32	(\$100)	2.20	FHD-909	NSCLC	PhI	First-in-class
Skor	Tscan Therapeutics Inc	TCRX	Overweight	\$10	\$84	\$252	\$32	(\$135)	(\$111)	2.27	TSC-101	AML/MDS/ALL	Ph2/3	-
Skor	Atea Pharmaceuticals Inc	AVIR	Equal-weight	\$6	\$275	\$425	--	(\$151)	(\$135)	3.14	BEM/RZR	HepC	Ph3	Best In Class
Skor	Bicycle Therapeutics Plc	BCYC	Equal-weight	\$17	\$466	\$793	\$0	(\$327)	(\$165)	4.81	Zelenectide Pevedotin	Mucosal melanoma	Ph2/3	Best In Class
Skor	Adagene Inc.	ADAG	Equal-weight	\$1-3	\$92	\$85	\$18	\$25	(\$30)	2.87	ADG126	MSS CRC	Ph1b2	Best In Class
Utz	Caballetta Bio Inc	CABA	Overweight	\$22	\$91	\$132	--	(\$40)	(\$88)	1.49	Rese-cel	Myositis	Ph1/2	First-in-Class
Utz	Kyverna Therapeutics	KYTX	Overweight	\$20	\$150	\$243	--	(\$93)	(\$114)	2.12	KYV-101	SPS	Ph2	First-in-Class
Utz	Vir Biotechnology Inc	VIR	Overweight	\$20	\$722	\$890	--	(\$168)	(\$446)	1.99	Tobevibart + elebsiran	Chronic hepatitis delta	Ph3	Best-in-Class
Utz	Zentalis Pharmaceuticals Inc	ZNTL	Equal-weight	\$8	\$105	\$332	--	(\$227)	(\$171)	1.95	Azenosertib	PROC	Ph3	First-in-Class
Utz	BioAge Labs Inc	BIOA	Underweight	\$5	\$161	\$321	--	(\$160)	(\$52)	6.22	BGE-102	Metabolic conditions	IND-enabling	Best-in-Class

- **22 companies** with negative enterprise values with:
- Total ~\$6.2B in aggregate market value and ~\$10.6B in aggregate cash as of YE24
- Represents a **42% discount** vs **20% - 40%** on aggregate cash suggesting these biotechs are now trading near **all time low** valuations relative to their underlying assets

- Of these negative EV companies, these are the ones we see the most **upside** (names that's are **best in class** & **first in class** and have **MS overweight** ratings): **RCUS** (Best In Class), **CTNM** (Best In Class), **ZBIO** (First In Class), **CABA** (First In Class), **KYTX** (First In Class), **SLN** (Best In Class), **GUTS** (Best In Class), **IOBT** (First In Class), **VIR** (Best In Class)



7 Macro to Micro – Our View On Individual Stocks ([link](#))

We see SMID Cap Biotech through [3 lenses](#) in increasing order of risk:

1. **Lens #1:** Stocks with established/growing revenue;
2. **Lens #2:** Launch stocks; and
3. **Lens #3:** Stocks with meaningful catalysts.

We also expect that M&A will be an active theme later in 2025.

Key Names

ARGX, ONC, SRPT, RYTM, ARQT, AXSM, LEGN, CRNX, INSM, JAZZ, AKRO, DYN, VKTX, CNTA, BCAX, RGNX, PHVS

There remains some fog...

The idiosyncratic nature of the US SMID CAP Biotech industry can make it challenging to identify broad-based unified fundamental themes. This is particularly so given uncertainty on policy post US election ([here](#)). With the macro picture painting a relatively uncertain picture for SMID Cap biotech we recommend looking at the sector through three lenses with a view that stocks with greater certainty should outperform.

What about the capital markets environment?

Our Global Equity & Credit Strategy team had expected a material rebound in M&A was coming ([here](#)) but this has remained subdued. Factors that could see capital markets activity pick up in the SMID Cap biotech industry later in 2025; i) more certain rate environment; ii) upcoming LOEs combined with balance sheet strength among US large-cap biopharma companies ([here](#)); and iii) a plethora of data read-outs/catalysts for our coverage universe in 2025.

...We continue to see the 2025 theme is to stick to what you can measure... We see best performance through [3 lenses](#):

1. **Lens #1 - Lower risk:** Stocks with an already-launched drug that has potential for top-line acceleration from an expanded label and/or share gains;
2. **Lens #2 - Medium Risk:** Stocks with a drug recently approved or due to be approved and launched in 2025; and
3. **Lens #3 - Higher Risk:** Stocks with material catalysts that may drive the "creep to commercialization" and an increase to probability of success (POS) assumptions, hence valuation/share price.

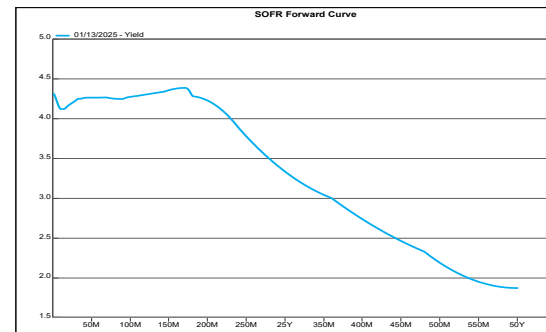
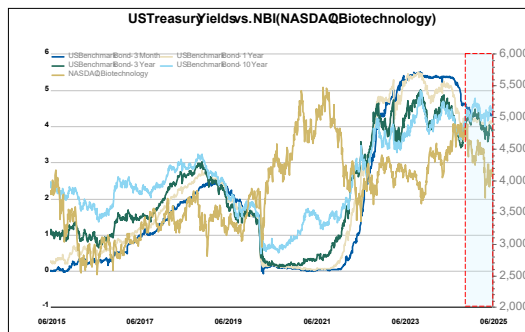
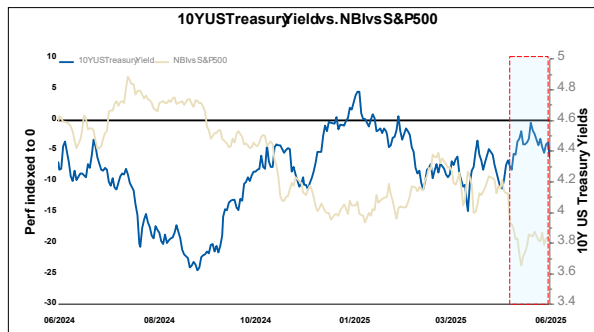
3. Lens #3: What is creeping to commercialization with material catalysts? OW companies we see as having the most meaningful catalysts and pushing toward commercialization (beyond 2025) are: [SANA](#), [ZBIO](#), [ABSI](#), [TCRX](#), [CMPS](#), [IRON](#), [RCKT](#), [DYN](#), [GUTS](#), [VKTX](#), [BCAX](#), [RGNX](#), [ACLX](#), [ENGN](#), [CNTA](#), [CGON](#), [CTNM](#), [BHVN](#), [GPCR](#), [RCUS](#), [INSM](#), [RARE](#), [CYTK](#), [PHVS](#).

1. Lens #1: What is easiest to measure? OW stocks with an established revenue train and potential for top line acceleration in 2025: We expect stocks that have a product with an existing market position combined with a label expansion to perform the best in 2025 - [ARGX](#), [AXSM](#), [BMRN](#), [LEGN](#), [ARQT](#), [SRPT](#), [RYTM](#), [ONC](#), [NBIX](#), [JAZZ](#), [HALO](#), [EXEL](#)

2. Lens #2: What is becoming measurable? OW stocks with recent approvals and recent/imminent launch as key driver: Stocks that are set to launch a drug in 2025 but without an established revenue stream move higher up the risk curve, but still provide upside. These include [PTCT](#), [NBIX](#), [JAZZ](#), [DNLI](#), [CGEM](#), [BHVN](#), [INSM](#), [RARE](#), [CRNX](#), [CYTK](#).



7 Macroeconomic Factors



Historically, the NBI had demonstrated an inverse relationship with the 10Y yields and market interest rates. Few factors that we believe have caused this trading dynamic:

Discount Rate Impact

Inverse relationship between rates and index performance/stock valuation is apparent. Forward looking projections on interest rates / treasury yields is on a downward trajectory which implies higher future intrinsic valuations in the sector and better index performance.

Access To Cheaper Cost of Capital

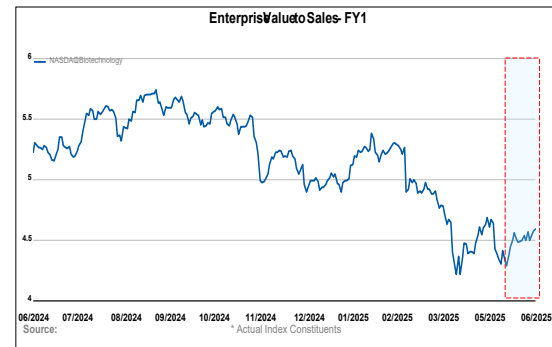
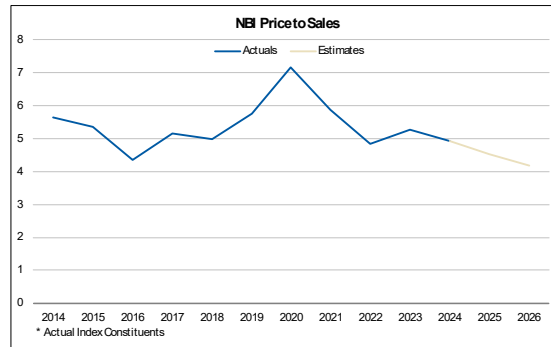
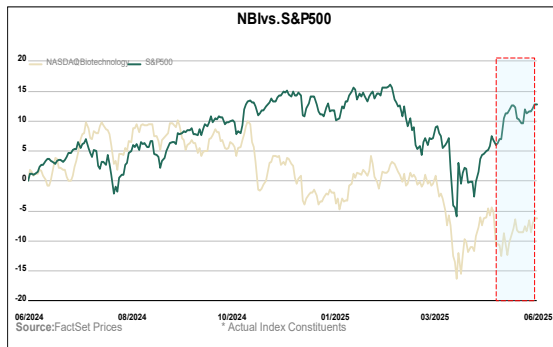
April 2025, Morgan Stanley revised forecast to no cuts in 2025 and rate cuts beginning in March 2026. Overall access to capital for growth focused biotechs may not improve until that time.

Risk Taking Appetite

Lower rates often shift investor preference to riskier, speculative assets as safer investment classes (treasuries / bonds will not yield sufficient returns). This may mean investors reallocate their resources to the clinical stage / pre-commercial companies in a lower interest rate environment. Historically, in a high-rate environment, investor preferences steer towards safer, income generating assets (more commercial stage biotechs with one or more drugs generating revenue)

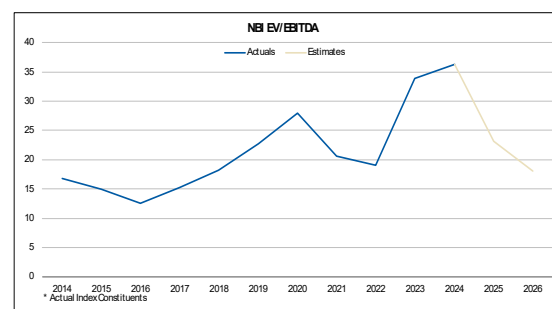
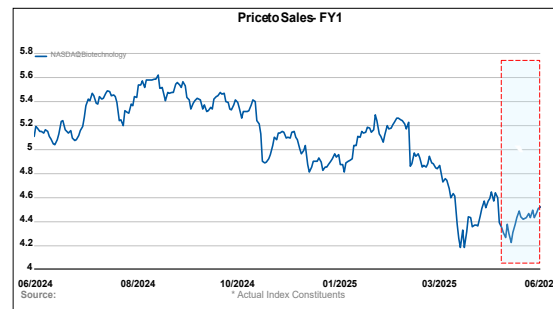


7 Microeconomic Factors – Price Performance & Index Valuations



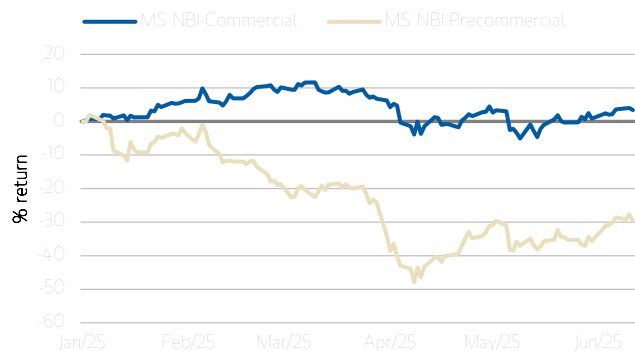
Biotech stocks showing some a stability last week.

Biotech Index recovery – after a few challenging years due to rising interest rates and tightening capital markets, biotech indexes (NBI) showed promising recovery in late 2024. However there's has been a pull back following the growing uncertainty around policy under the new administration and changes at the US FDA.





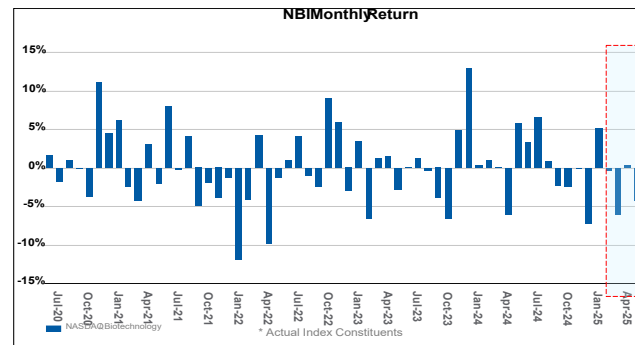
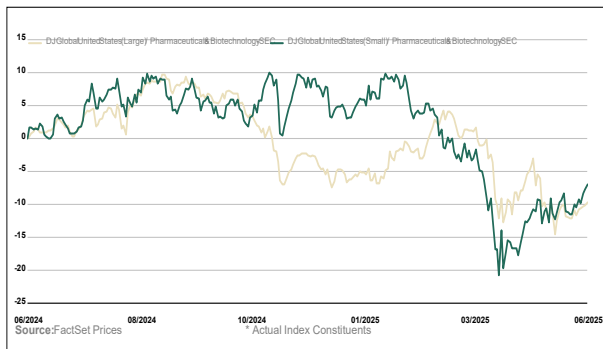
7 Microeconomic Factors – Category Performance



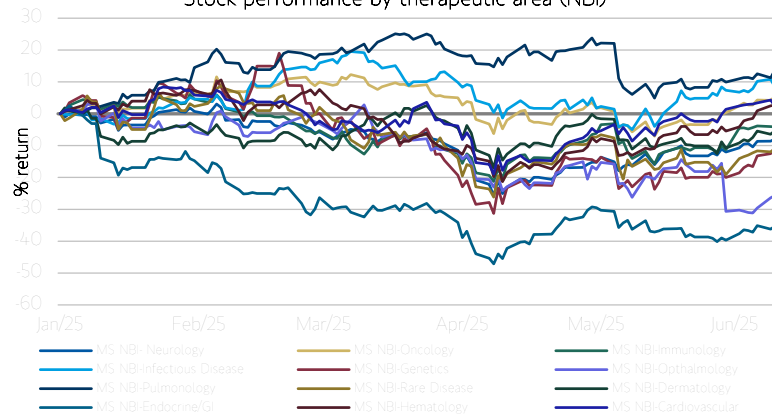
Precommercial stage companies come back contributing to overall NBI returns as policy & tariff environment becomes more clear on a possible path forward

Commercial stage companies provide relative stability in volatile trading environments while pre-commercial companies may not

Therapeutic area performance:
Pulmonology the highest and **Endocrine/GI** lagging.

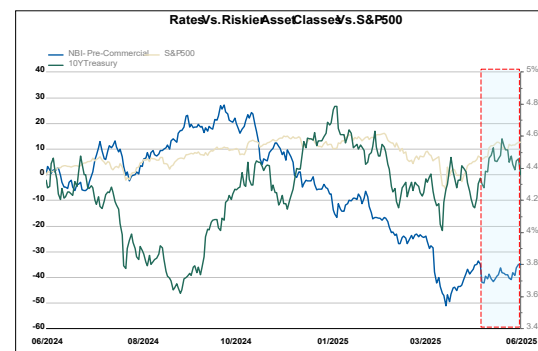
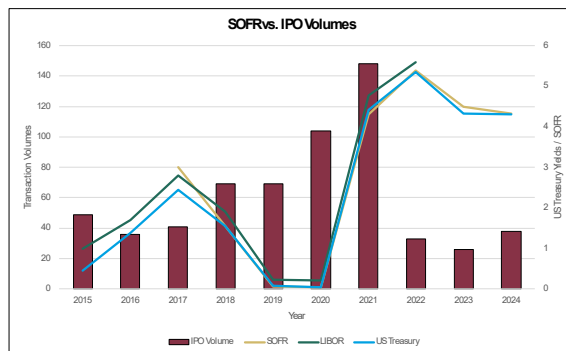
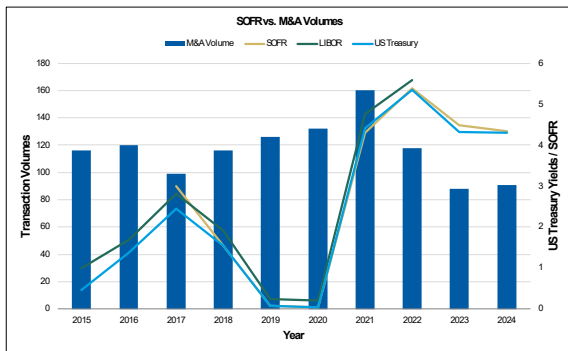


Stock performance by therapeutic area (NBI)





7 Capital Markets – Financing Environment, Yields Up



Historical data at an industry level broadly suggests an inverse correlation between lowered rates and biotech performance. This is driven by a combination of:

1

Expectations for potential increased **M&A activity** if **interest rates trend down** though this has not happened.

2

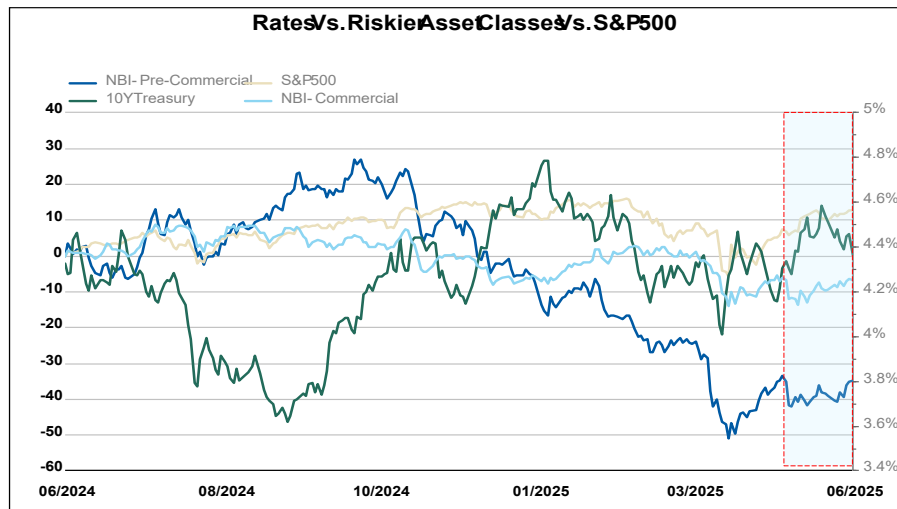
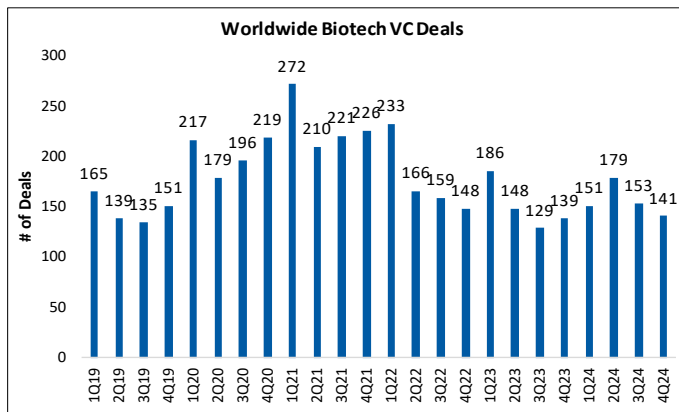
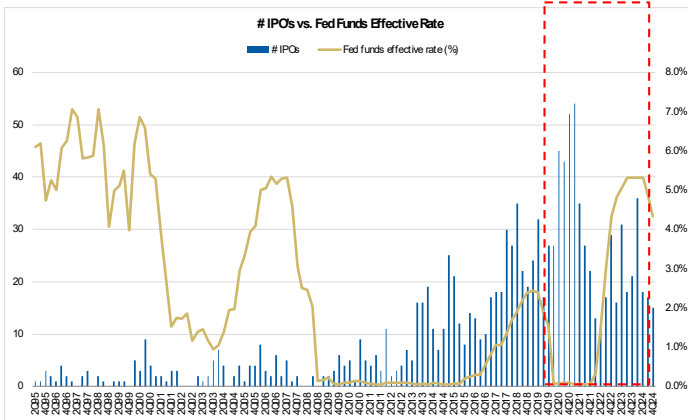
Lower Valuations as biotech DCF valuations are particularly sensitive to changes in discount rates given their long-dated cash flows

3

Historical trading dynamics for biotech suggest it trades broadly in line with other risk assets that generally outperform during lower rate regimes



7 Capital Markets – IPOs, VC Investments and Valuations



High-rate environment

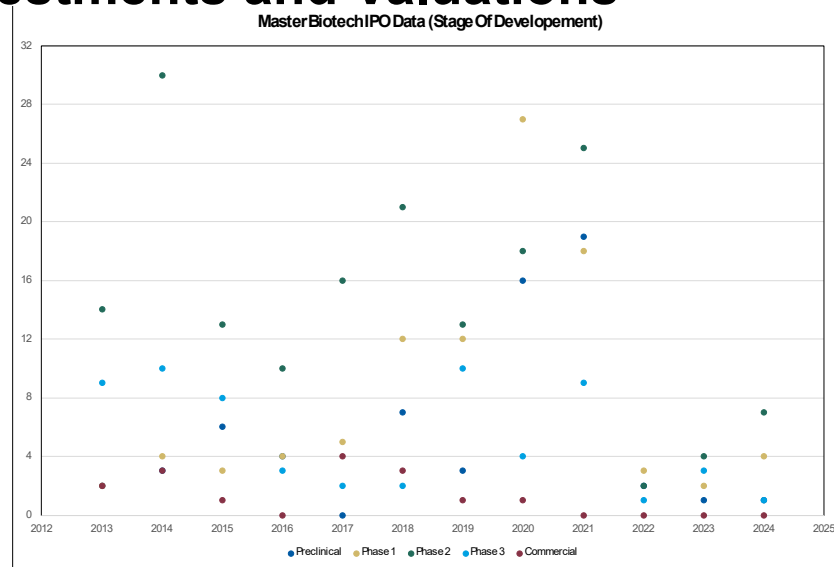
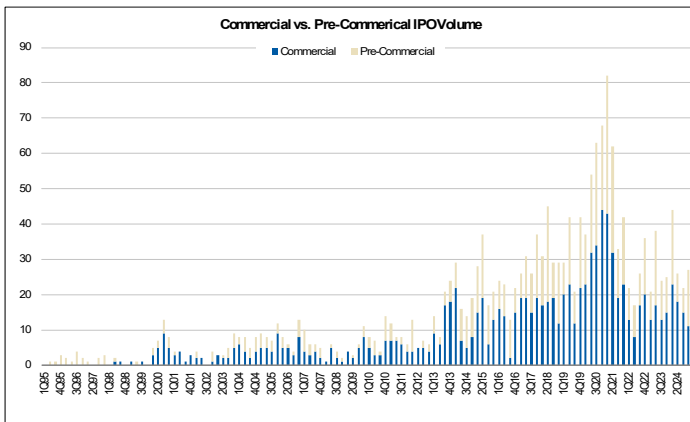
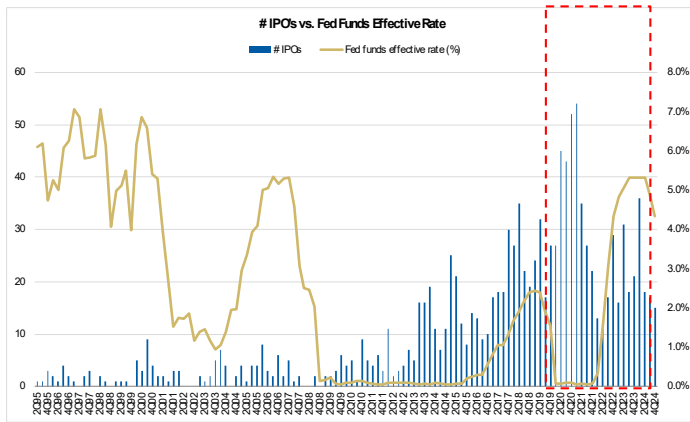
- Trading reallocations to commercial biotech
- Higher costs of capital (discount rate) drives i) **lower number of M&A deals**, and ii) **lower overall deal size**

Low-rate environment

- Trading allocations to precommercial / riskier and more speculative asset classes
- Lower cost of capital drive **higher # of VC deals in precommercial / illiquid investments**

Trading dynamics suggest overall SMID cap sensitivity to macroeconomic / rate environment. Investors risk appetite / willingness to accept illiquidity premiums largely depends on outlook of regulatory / economic policies. Lowering rates in 2025 may mean improved valuations and trading for implied M&A/IPO premiums

7 Capital Markets – IPOs, VC Investments and Valuations

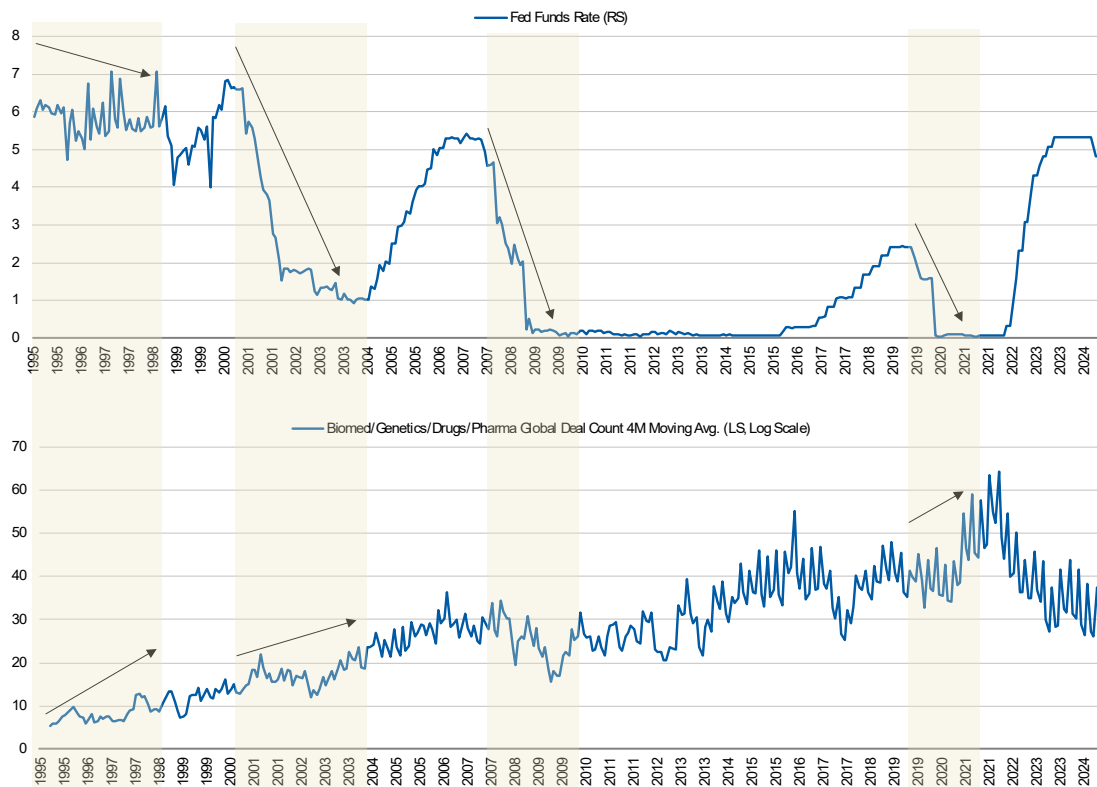


Biotech IPOs – By Stage Of Development

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Preclinical	2	3	6	4	0	7	3	16	19	2	1	1
Phase 1	2	4	3	4	5	12	12	27	18	3	2	4
Phase 2	14	30	13	10	16	21	13	18	25	2	4	7
Phase 3	9	10	8	3	2	2	10	4	9	1	3	1
Commercial	2	3	1	0	4	3	1	1	0	0	0	0
Total	29	50	31	21	27	45	39	66	71	8	10	13

Key Takeaway: Pandemic saw risk appetite increase for IPOs with earlier stage assets. Current development stage trends now more consistent with pre-pandemic periods.

7 Capital Markets – Global Deal Count



Outside of the interest rate outlook, we believe there remains **a fundamental need for SMID Cap biotech M&A**, which is driven by the patent expirations that the large cap Biopharma companies are expected to face at the end of this decade

The need for M&A has been underscored by larger deals undertaken by multiple companies and others across the industry remaining active in bolt-ons even during the higher rate regime of 2022-2023

While the trend of M&A in life sciences has generally been positive over time, we observe a particular pick-up in the timeframes which coincided with rate lowering regimes.



8 Catalyst Calendar (Past Events - Price Performance)

Date	Ticker	Event	Day 1 Perf.	Follow Through Perf.	Follow Through Perf. Vs XBI
3-Apr-25	SRPT	BMA places partial clinical hold on three Bevidys studies	-6.2%	-14.2%	-5.8%
7-Apr-25	RYTM	Satmelanotide Phase 3 topline data in HO	17.1%	9.4%	4.6%
8-Apr-25	RPRX	REC-3666: PhI EXCELLENCE first patient dosed (FPD) in b-cell malignancies	-5.5%	42.1%	32.4%
10-Apr-25	ARGX	Vygart SC-PFS: PDUFA date for MG& QDP	-3.2%	9.2%	3.1%
11-Apr-25	MURA	ARTISIRY-6 results; discontinuation of nemvaleukin; announcement of R1 and exploring strategic alternatives	3.5%	161.2%	159.6%
15-Apr-25	KYMR	KT-621 (STAT6): Initiate PhIb trial in AD	0.1%	20.6%	17.2%
22-Apr-25	PTCT	Sapiaterin: Positive CHMP opinion for PKU	0.0%	2.8%	-2.7%
25-Apr-25	CGON	Final Phase 3 BOND-003 Cohort Results in high-risk, BCG-unresponsive NMIBC	3.9%	29.9%	25.8%
28-Apr-25	RHTX	PHD-909 preclinical combination data at AACR Meeting	0.7%	-11.6%	-13.2%
28-Apr-25	ALNY	Positive CHMP opinion for vutrisiran for ATTR-QM	1.3%	7.3%	5.8%
28-Apr-25	BCAX	Fifa: Ph1b expansion ORR in 2L+ cSCC at AACR	1.9%	-5.5%	-7.0%
28-Apr-25	ABVX	Obefazimod: Completed patient enrollment in UC trials	6.1%	-1.9%	-3.5%
29-Apr-25	BPMC	1Q25 earnings	0.0%	12.1%	17.8%
30-Apr-25	PTCT	PTC518: Topline data from PIVOT-HD	0.6%	-18.2%	-11.5%
1-May-25	PTCT	1Q25 earnings	-0.6%	-14.2%	-8.7%
5-May-25	APLS	1Q25 earnings	-1.8%	-12.3%	-8.4%
6-May-25	KYMR	Novel oral immunology program with a first-in-class development candidate to be disclosed	-14.9%	9.0%	8.6%
7-May-25	VIR	MARCH-B Phase 2: 24-week post treatment (functional cure) data in HBV	-0.4%	-19.8%	-18.5%
9-May-25	ABS	ABS-101: PhI clinical study initiation	-1.8%	4.7%	1.3%
9-May-25	SRPT	Approval of Bevidys in Japan	-0.7%	0.4%	-3.0%
13-May-25	ACLY	Anito-cel: Updated IMMagine-1 data	-2.1%	3.9%	-1.0%
13-May-25	CABA	Announced alignment with FDA on rese-cel myositis registrational study	2.3%	42.4%	37.5%
14-May-25	ROKT	Preliminary Ph1 data for RP-A01 in PKP2-QM	-8.5%	8.8%	5.0%
15-May-25	IONS	Announced topline data from Ph3 ESSANCE study of olesarsen in mHTG	1.2%	0.8%	-1.3%
15-May-25	ARGX	Zoryve Foam: PDUFA Date for scalp & body psoriasis	0.2%	0.2%	-1.9%
19-May-25	BCAX	Fifa: 1L R1M HNSCC ASCO abstracts for Fifa and petosemtamab	5.1%	-34.4%	-33.9%
22-May-25	ROKT	Safety update disclosing patient death and FDA clinical hold	-0.5%	-61.7%	-61.7%
23-May-25	YMAB	Ph1 Q22 SIDA Part A Data	4.6%	9.7%	6.9%
27-May-25	LEGN	Initial clinical data from the DLL-3 CAR-T program (PhI dose escalation data) at ASCO	-0.5%	-1.1%	-5.0%
28-May-25	LEGN	Initial clinical data from QDN18.2 CAR-T program	-1.6%	7.3%	2.6%
31-May-25	GIMAB	Rina-S 2L+ Endometrial Cancer Ph2 data update at ASCO	-1.7%	4.7%	-0.2%
31-May-25	GUTS	RNA-001 (pancreatic gene therapy) in inadequately controlled T2D CTA submission	0.0%	2.6%	-2.3%
31-May-25	BCAX	Fifa: Updated Ph1b expansion data (PFS=1 1L R1M HNSCC) at ASCO	-2.0%	20.9%	16.0%
1-Jun-25	JAZZ	Zanidatamab long-term outcomes and OS4-year follow up of a Phase 2 trial in GE4a at ASCO	-0.2%	1.2%	-3.7%
1-Jun-25	JAZZ	Zapzelca Phase 3 Imforte results in 1LES-SQLC	-0.2%	1.2%	-3.7%
1-Jun-25	KYMR	KT-621 (STAT6): PhI HV data readout	-2.0%	59.5%	54.6%
1-Jun-25	CGEM	Announces in-licensing of BOMax003 TCEvotinamig for autoimmune diseases	-0.4%	1.9%	-3.0%
2-Jun-25	CABA	Share additional Ph1/2 clinical data in myositis, SLE, and SS: S	10.2%	6.6%	4.3%
2-Jun-25	CLDX	Barzolvolimab: 76-week Ph2 data in CSU	1.0%	-1.3%	-3.5%
2-Jun-25	ACLY	Anito-cel: IMMagine-1 presentation at EHA	-0.2%	7.7%	5.5%
2-Jun-25	INCY	mutCALR PhI POC data in ET	0.4%	3.1%	0.9%
2-Jun-25	KALV	PDUFA date	9.5%	6.3%	4.0%
4-Jun-25	SANA	UR421 data presentation (6mo) at ADA	-0.9%	7.1%	6.4%
4-Jun-25	BPMC	Bezacastinib (competitor catalyst): Topline SUMMIT readout in Nonadvanced SM	0.4%	-0.1%	-0.8%

Key Takeaways

1. Stock performance post catalyst events across US SMID Cap biotech has been generally soft.
2. Notice of data and regulatory updates from MURA, CGON, CABA have driven outperformance.
3. Pipeline data updates have mostly not met expectations or were priced in ahead of the event.
4. This week we add in catalysts reported from 1st of June onwards which shows some improving trend (KYMR of note)

9 Ownership Peer Analysis – Q1 2025 13F Filings (Order: Mkt Cap)

Ticker	Name	Hedge Fund			Mutual Fund		
		QoQ	6M	YoY	QoQ	6M	YoY
ALNY-USA	Alnylam Pharmaceuticals, Inc.	9.6%	27.4%	-5.4%	-2.0%	-3.1%	-6.1%
ARGX-USA	argenx SE Sponsored ADR	-2.4%	-13.2%	-15.5%	-4.7%	-11.8%	-8.6%
ONC-USA	BeOne Medicines Ltd. Sponsored ADR	15.6%	4.3%	10.1%	-4.0%	4.4%	-16.7%
GMAB-USA	Genmab A/S Sponsored ADR	38.9%	79.9%	95.9%	2.5%	-19.5%	-43.5%
INCY-USA	Incyte Corporation	1.6%	-3.4%	-17.6%	2.3%	-1.6%	-14.8%
INSM-USA	Insmet Incorporated	8.3%	10.2%	68.0%	6.2%	7.8%	34.4%
NBIX-USA	Neurocrine Biosciences, Inc.	-15.3%	-8.0%	-18.6%	4.9%	2.5%	3.0%
EXEL-USA	Exelixis, Inc.	-2.4%	-2.2%	3.9%	-4.0%	-11.6%	-23.5%
BMRN-USA	BioMarin Pharmaceutical Inc.	15.6%	19.3%	13.1%	-3.9%	-4.7%	1.0%
ASND-USA	Ascendis Pharma A/S Sponsored ADR	1.5%	3.5%	14.7%	-0.1%	-1.9%	-9.4%
HALO-USA	Halozyme Therapeutics, Inc.	-2.6%	100.1%	8.7%	-5.8%	-13.7%	-11.6%
JAZZ-USA	Jazz Pharmaceuticals Public Limited Company	-18.4%	-22.6%	-3.8%	2.9%	-0.4%	-6.7%
BPMC-USA	Blueprint Medicines Corp.	8.7%	42.3%	21.0%	1.1%	0.5%	2.1%
BBIO-USA	BridgeBio Pharma, Inc.	5.9%	10.3%	14.2%	13.3%	15.4%	12.7%
TLPFF-USA	Teleperformance SE	14.3%	-1.6%	-23.5%	-9.9%	-14.1%	-15.9%
IONS-USA	Ionis Pharmaceuticals, Inc.	44.3%	31.1%	57.5%	-4.2%	-5.8%	12.4%
LEGN-USA	Legend Biotech Corp. Sponsored ADR	-48.5%	4.3%	-2.5%	-3.8%	-18.4%	-11.6%
LINTH-USA	Lantheus Holdings Inc	4.1%	32.7%	19.8%	5.6%	15.9%	23.0%
AXSM-USA	Axsome Therapeutics, Inc.	-17.4%	-28.7%	-36.0%	-0.1%	-4.8%	9.4%
RYTM-USA	Rhythm Pharmaceuticals, Inc.	-12.6%	-11.3%	-6.0%	17.4%	27.7%	5.5%
PTCT-USA	PTC Therapeutics, Inc.	-3.9%	-3.6%	-1.0%	-0.1%	-13.3%	-33.7%
AKRO-USA	Akero Therapeutics, Inc.	18.5%	24.8%	18.2%	5.6%	0.4%	5.3%
SRPT-USA	Sarepta Therapeutics, Inc.	14.3%	14.5%	-24.7%	-1.5%	-6.5%	0.3%
ACAD-USA	ACADIA Pharmaceuticals Inc.	-6.7%	-12.1%	-14.3%	33.6%	22.4%	0.7%
ACIX-USA	Arcellx, Inc.	19.7%	16.1%	15.5%	4.1%	13.7%	17.5%
RAVE-USA	Ultragenyx Pharmaceutical, Inc.	4.9%	9.3%	13.2%	3.0%	-5.9%	-1.8%
VKTX-USA	Viking Therapeutics, Inc.	16.6%	15.6%	-16.1%	-10.8%	-7.9%	9.2%
CRNX-USA	Crinetics Pharmaceuticals Inc	-9.5%	-2.5%	-29.6%	-2.2%	21.4%	53.0%
ARWR-USA	Arrowhead Pharmaceuticals, Inc.	-8.9%	5.0%	22.0%	7.8%	2.1%	-1.4%
MIRM-USA	Miram Pharmaceuticals, Inc.	8.8%	8.1%	16.2%	-0.1%	-4.2%	-29.9%
CGON-USA	CG Oncology, Inc.	8.4%	8.2%	35.2%	1.0%	27.8%	113.7%
KYMR-USA	Kymera Therapeutics, Inc.	-0.8%	0.1%	-3.0%	5.7%	12.3%	9.8%
DNLI-USA	Denali Therapeutics Inc.	2.8%	20.2%	-6.0%	6.2%	8.2%	27.0%
GLPG-USA	Galapagos NV Sponsored ADR	24.3%	38.6%	-5.8%	-3.8%	-11.3%	-1248.2%
FOLD-USA	Amicus Therapeutics, Inc.	8.6%	9.6%	5.5%	-1.6%	-8.5%	-13.7%
RPRX-USA	Recursion Pharmaceuticals, Inc. Class A	-27.8%	-37.2%	18.4%	-3.0%	19.1%	61.9%
IMCR-USA	Immunocore Holdings Plc Shs Sponsored American Depositary Shares Re	14.4%	25.2%	-2.2%	-8.1%	-11.5%	-5.4%
IDYA-USA	IDEAYA Biosciences, Inc.	-3.4%	-17.8%	-10.0%	0.9%	0.8%	21.6%

Key Takeaways

1. **Q125** most notable **Hedge Fund** exposure **increase** (vs Q424) in ALNY, GMAB, ONC, BMRN, IONS, SRPT, AKRO, ACLX, VKTX, GLPG, DISC.
2. **Q125** most notable **Hedge Fund** exposure **decrease** (vs Q424) in NBIX, JAZZ, AXSM, LEGN, RYTM, ACAD, CRNX, ARWR.
3. **Q125** most notable **Mutual Fund** exposure **increase** (vs Q424) in RYTM, ACAD, CNTA, DISC.
4. **Q125** most notable **Mutual Fund** exposure **decrease** (vs Q424) in VKTX, HALO, BMRN.






9 Ownership Peer Analysis – Q1 2025 13F Filings (Order: Mkt Cap)

Ticker	Name	Hedge Fund			Mutual Fund		
		QoQ	6M	YoY	QoQ	6M	YoY
ONTA-USA	Ontessa Pharmaceuticals PLCADR	6.5%	4.7%	42.1%	10.5%	51.3%	185.6%
AROT-USA	Arcutis Biotherapeutics Inc	-6.3%	-14.6%	-19.8%	-6.2%	-10.7%	-18.6%
IRON-USA	Disc Medicine, Inc.	36.4%	7.9%	32.2%	36.9%	40.8%	56.2%
DYN-USA	Dyne Therapeutics Inc	19.6%	9.6%	34.3%	12.3%	13.0%	63.8%
SDGR-USA	Schrodinger, Inc.	12.8%	25.8%	46.3%	5.1%	3.9%	17.6%
GPOR-USA	Structure Therapeutics, Inc. Sponsored ADR	-3.1%	-3.2%	31.8%	-3.3%	-4.9%	42.2%
PHVS-USA	Pharvaris N.V.	1.4%	-4.3%	1.0%	28.3%	81.2%	-9.2%
NRIX-USA	Nurix Therapeutics, Inc.	14.5%	31.9%	71.4%	-1.6%	5.5%	67.8%
VIR-USA	Vir Biotechnology, Inc.	4.7%	79.0%	60.3%	2.2%	4.6%	3.3%
BCAX-USA	Bicara Therapeutics Inc.	4.3%	15.4%	-	9.6%	27.2%	-
OCEM-USA	Ollinlan Therapeutics, Inc.	2.0%	-4.7%	84.9%	-4.8%	-5.7%	47.3%
SANA-USA	Sana Biotechnology, Inc.	-2.7%	34.6%	8.2%	-21.5%	-29.1%	-29.0%
RGNX-USA	REGENXBIO, Inc.	7.2%	13.3%	23.2%	-7.5%	-16.2%	-24.3%
BCYC-USA	Bicycle Therapeutics Plc Sponsored ADR	-5.3%	-12.9%	4.3%	-5.1%	-13.7%	30.6%
ERAS-USA	Erasca, Inc.	-6.8%	-2.4%	192.4%	-10.4%	-24.9%	215.5%
CEL-USA	Calcuity Inc.	4.2%	0.0%	50.8%	0.1%	18.4%	111.5%
SAGE-USA	SAGE Therapeutics, Inc.	57.7%	62.2%	67.4%	-3.5%	-34.1%	-94.5%
OMPS-USA	COMPASSPathways Plc Sponsored ADR	84.9%	75.0%	114.2%	571.7%	-198.7%	-145.6%
ABVX-USA	Abivax SA Sponsored ADR	13.5%	31.2%	29.8%	10.4%	3.2%	-6.9%
VIGL-USA	Vigil Neuroscience, Inc.	-1.9%	-19.8%	2.6%	80.2%	139.4%	143.2%
ABSI-USA	Abcsi Corporation	-4.0%	-25.5%	-57.3%	-2.1%	-7.8%	22.3%
CRVS-USA	Corvus Pharmaceuticals, Inc.	-3.5%	15.6%	248.4%	8.0%	12.0%	79.5%
ROKT-USA	Rocket Pharmaceuticals, Inc.	-9.3%	27.3%	17.5%	4.7%	4.1%	9.1%
SUN-USA	Silence Therapeutics PLC Sponsored ADR	-21.0%	-42.9%	-41.7%	14.3%	-88.7%	-81.2%
AMR-USA	Atea Pharmaceuticals, Inc.	-15.7%	-22.7%	-12.1%	9.5%	7.4%	9.1%
FHTX-USA	Foghorn Therapeutics, Inc.	-0.4%	6.2%	373.9%	5.5%	9.7%	66.0%
THRD-USA	Third Harmonic Bio, Inc.	26.0%	14.6%	17.2%	-15.0%	16.3%	25.4%
YMAB-USA	Y-mAbs Therapeutics, Inc.	0.3%	0.3%	24.8%	-15.7%	-14.1%	-5.9%
ENGN-USA	enGene Holdings Inc.	-12.6%	20.1%	25.2%	-1.5%	-589.3%	-1476.3%
CATX-USA	Perspective Therapeutics, Inc.	-11.4%	11.5%	131.4%	-2.5%	-61.5%	37.0%
FATE-USA	Fate Therapeutics, Inc.	0.7%	-11.5%	-19.0%	9.7%	-11.9%	-24.2%
ALEC-USA	Alector, Inc.	7.0%	26.2%	-3.1%	-0.1%	-32.2%	-32.1%
VTYX-USA	Ventyx Biosciences, Inc.	-6.0%	-8.2%	-31.0%	-0.5%	-1.4%	-1.5%
LYEL-USA	Lyell Immunopharma, Inc.	7.0%	71.6%	19.7%	-3.0%	-6.5%	-22.7%
KYTX-USA	Kyverna Therapeutics, Inc.	-41.6%	-50.6%	-399.4%	-53.2%	-70.8%	-46.1%
IVMD-USA	Inivid, Inc.	-7.2%	-15.2%	-16.1%	-1.7%	-0.1%	87.5%
CABA-USA	Cabaletta Bio, Inc.	-15.5%	-24.8%	-55.4%	-23.0%	-57.4%	-61.9%
PROK-USA	ProKidney Corp. Class A	0.8%	0.5%	177.7%	-0.3%	5.2%	150.1%
GUTS-USA	Fractyl Health, Inc.	-6.6%	-7.2%	-21.8%	0.9%	41.4%	108.2%

Key Takeaways (Continued...)

1. ...moving down in market cap positioning still remains higher vs one year ago in biotech for mutual funds...
2. ...and general selling persisted...
3. ...given smaller market cap and lower liquidity, outflows could be ongoing (As reflected in pre commercial index performance on Slide 10)
4. This could suggest that catalysts (irrespective of fundamental outcome) are being used as liquidity events to exit positions.

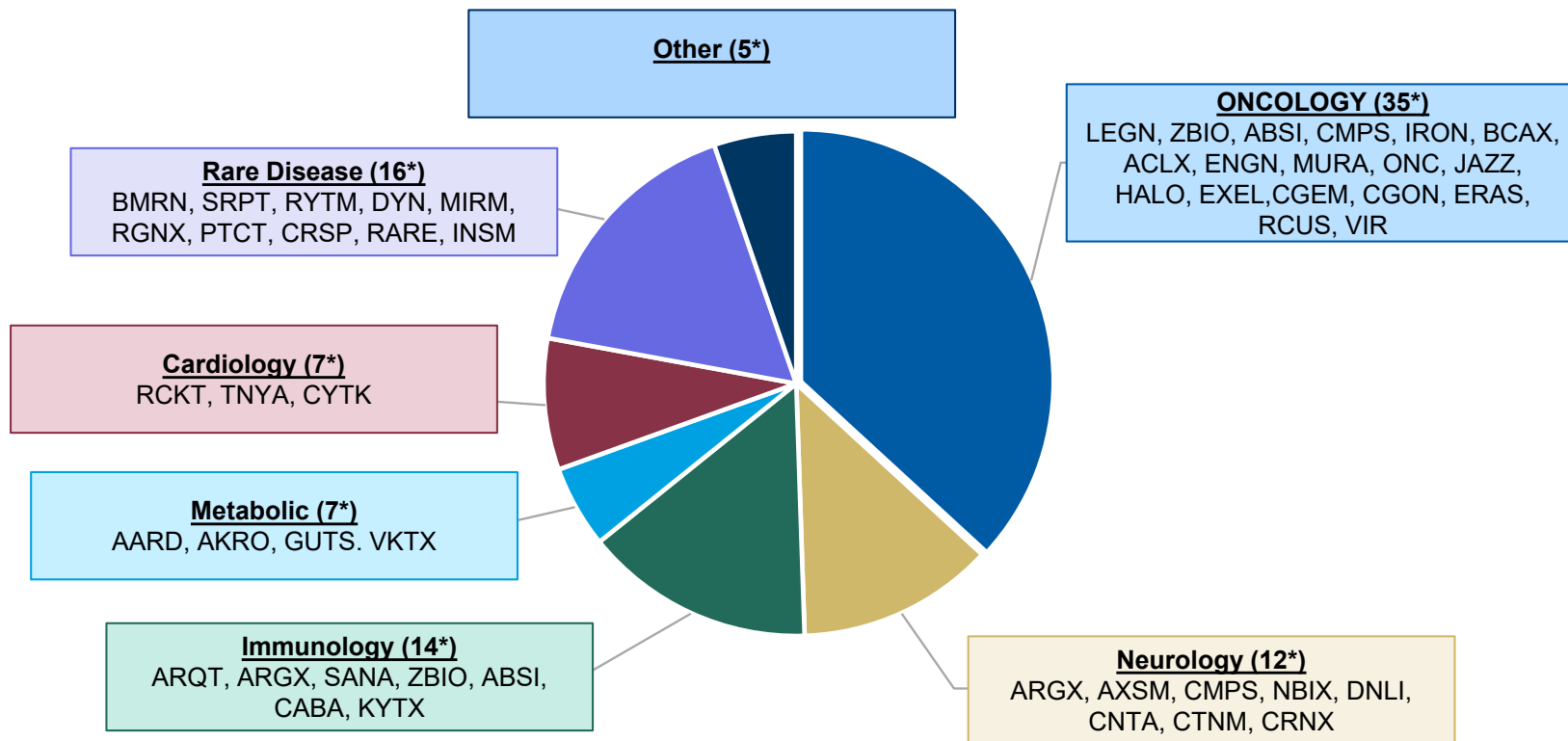
10 2025 Healthcare Industry Events

2025 Healthcare Industry Events		
January 	February 	March 
April 	May 	June <ul style="list-style-type: none"> Advisory Committee on Immunization Practices (ACIP) Meeting (6/25-6/26) European Alliance of Associations for Rheumatology (EULAR) (6/11-6/14) European Hematology Association (EHA) Congress (6/12-6/15)
July <ul style="list-style-type: none"> ENDO 2025 (7/12-7/15) American Society of Retina Specialists (ASRS) Annual Meeting (7/30 – 8/2) 	August <ul style="list-style-type: none"> European Society of Cardiology (ESC) Congress 2025 (8/29-9/1) 	September <ul style="list-style-type: none"> Morgan Stanley Global Healthcare Conference (9/8-9/10) American Neurological Association (ANA) Annual Meeting (9/13-9/16) European Association for the Study of Diabetes (EASD) - Sept 16 to Sept 19, 2025
October <ul style="list-style-type: none"> Advisory Committee on Immunization Practices (ACIP) Meeting (10/22-10/23); European Society for Medical Oncology (ESMO) Congress (10/17-10/21) American Society of Rheumatology (ACR) Convergence 2025 (10/24-10/29) 	November <ul style="list-style-type: none"> American Society of Nephrology (ASN) Kidney Week (11/5 – 11/9) American Association for the Study of Liver (AASLD) Liver Meeting 2025 (11/7-11/11) American Heart Association (AHA) Meeting 2025 (11/8-11/10) Negotiated prices for list of 2027 drugs to be announced 11/30 	December <ul style="list-style-type: none"> American Society of Hematology (ASH) Annual Meeting (12/6-12/9); San Antonio Breast Cancer Symposium (SABCS) (12/9-12/12)

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Comparable Sheet

MS Coverage By Therapeutic Category (Overweight Spotlight)



MS Analyst Coverage By Therapeutic Area

Sean Laaman	
Therapeutic Area	No. Of Stocks
Oncology	8
Neurology	6
Immunology	-
Metabolic	-
Cardiology	-
Rare Disease	-
Other	-

Terence Flynn	
Therapeutic Area	No. Of Stocks
Oncology	4
Neurology	-
Immunology	-
Metabolic	1
Cardiology	-
Rare Disease	3
Other	0

Vikram Purohit	
Therapeutic Area	No. Of Stocks
Oncology	13
Neurology	5
Immunology	8
Metabolic	-
Cardiology	-
Rare Disease	3
Other	1

Michael Ulz	
Therapeutic Area	No. Of Stocks
Oncology	4
Neurology	-
Immunology	6
Metabolic	3
Cardiology	6
Rare Disease	4
Other	-

Judah Frommer	
Therapeutic Area	No. Of Stocks
Oncology	5
Neurology	-
Immunology	-
Metabolic	-
Cardiology	-
Rare Disease	2
Other	3

Maxwell Skor	
Therapeutic Area	No. Of Stocks
Oncology	1
Neurology	1
Immunology	-
Metabolic	-
Cardiology	1
Rare Disease	4
Other	-



Biotechnology Coverage
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Friday, June 13, 2025

Morgan Stanley

U.S. SMID Biotech - MS estimates

Ticker	Company Name	Rating	PT	Up / Down	Latest Price	Price performance		Market Cap (\$M)	Cash (\$M)	Debt (\$M)	Enterprise Value (\$M)
						2024	YTD				
ACAD	ACADIA Pharmaceuticals Inc.	Equal-Weight	\$24	10%	\$22	-41%	10%	3,638	682	56	3,013
ALEC	Alector, Inc.	Underweight	\$2	-7%	\$2	-76%	-3%	162	355	41	(152)
CGEM	Cullinan Therapeutics, Inc.	Overweight	\$35	291%	\$9	20%	-7%	528	304	2	226
CGON	CG Oncology, Inc.	Overweight	\$52	96%	\$27	#N/A	-7%	2,020	688	1	1,333
CNTA	Centessa Pharmaceuticals PLC ADR	Overweight	\$27	124%	\$12	110%	-32%	1,609	285	118	1,442
CTNM	Contineum Therapeutics, Inc. Class A	Overweight	\$20	332%	\$5	#N/A	-40%	89	191	6	(96)
DNLI	Denali Therapeutics Inc.	Overweight	\$33	121%	\$15	-5%	-30%	2,168	818	49	1,399
ERAS	Erasca, Inc.	Overweight	\$4	161%	\$2	18%	-6%	433	305	51	180
EXEL	Exelixis, Inc.	Overweight	\$47	12%	\$42	39%	21%	11,394	1,031	187	10,550
HALO	Halozyne Therapeutics, Inc.	Equal-Weight	\$62	14%	\$55	29%	-7%	6,720	748	1,507	7,480
IMCR	Immunocore	Equal-Weight	\$35	-2%	\$36	-57%	20%	1,790	837	434	1,387
JAZZ	Jazz Pharmaceuticals Public Limited Company	Overweight	\$166	51%	\$110	0%	-19%	6,674	2,572	5,420	9,522
NBIX	Neurocrine Biosciences, Inc.	Overweight	\$148	18%	\$125	4%	7%	12,372	944	493	11,921
ONC	BeOne Medicines Ltd. Sponsored ADR	Overweight	\$313	13%	\$277	2%	23%	34,870	2,528	997	33,339



Biopharma Coverage
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Friday, June 13, 2025

Morgan Stanley

U.S. SMID Biotech - MS estimates

Ticker	Company Name	Rating	PT	Up/Down	Latest Price	Price performance		Market Cap (\$M)	Cash (\$M)	Debt (\$M)	Enterprise Value (\$M)
						2024	YTD				
ALMS	Alumis Inc.	Overweight	\$23	623%	\$3	▲ #N/A	-38%	305	209	32	128
ARVN	Arvinas, Inc.	Equal-Weight	\$11	45%	\$8	-53%	-57%	553	954	11	(391)
BHVN	Biohaven Ltd.	Overweight	\$63	304%	\$16	-13%	-63%	1,592	324	36	1,304
CCCC	C4 Therapeutics, Inc.	Equal-Weight	NA	-	\$2	-36%	-49%	115	215	64	(36)
CRSP	CRISPR Therapeutics AG	Underweight	\$32	-22%	\$41	-37%	-5%	3,565	1,859	219	1,926
GPCR	Structure Therapeutics, Inc. Sponsored ADR	Overweight	\$120	440%	\$22	-33%	-9%	1,278	837	8	449
LEGN	Legend Biotech Corp. Sponsored ADR	Overweight	\$80	111%	\$38	-46%	4%	6,962	1,005	363	6,319
NRIX	Nurix Therapeutics, Inc.	Equal-Weight	\$17	42%	\$12	83%	-32%	912	550	27	389
NTLA	Intellia Therapeutics, Inc.	Equal-Weight	\$11	32%	\$8	-62%	-13%	865	504	119	480
PRME	Prime Medicine, Inc.	Equal-Weight	NA	-	\$1	-67%	-44%	192	144	121	169
RCUS	Arcus Biosciences, Inc.	Overweight	\$22	135%	\$9	-22%	-26%	990	997	60	53



Biotechnology Coverage
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Friday, June 13, 2025

Morgan Stanley

U.S. SMID Biotech - MS estimates

Ticker	Company Name	Rating	PT	Up/Down	Latest Price	Price performance		Market Cap (\$M)	Cash (\$M)	Debt (\$M)	Enterprise Value (\$M)
						2024	YTD				
ABSI	Absci Corporation	Overweight	\$7	146%	\$2.8	-38%	-43%	362	150	9	221
ARGX	argenx SE Sponsored ADR	Overweight	\$750	28%	\$586.8	62%	-10%	35,771	3,379	39	32,432
ARQT	Arcutis Biotherapeutics Inc	Overweight	\$19	41%	\$13.5	331%	10%	1,609	199	111	1,521
ASND	Ascendis Pharma A/S Sponsored ADR	Overweight	\$250	46%	\$170.9	9%	20%	10,421	559	915	10,777
AXSM	Axsome Therapeutics, Inc.	Overweight	\$190	79%	\$106.3	6%	-19%	5,231	301	211	5,142
BMRN	BioMarin Pharmaceutical Inc.	Overweight	\$105	83%	\$57.3	-32%	-11%	10,985	1,272	610	10,322
CERT	Certara, Inc.	Equal-Weight	\$16	43%	\$11.2	-39%	-22%	1,814	179	309	1,944
CMPS	COMPASS Pathways Plc Sponsored ADR	Overweight	\$17	276%	\$4.5	-57%	2%	423	260	32	194
FHTX	Foghorn Therapeutics, Inc.	Equal-Weight	\$4	-12%	\$4.5	-27%	-26%	253	221	35	67
GMAB	Genmab A/S Sponsored ADR	Equal-Weight	\$25	8%	\$23.1	-34%	10%	14,776	3,226	143	11,693
INCY	Incyte Corporation	Equal-Weight	\$68	-2%	\$69.2	10%	-1%	13,399	2,409	43	11,033
IRON	Disc Medicine, Inc.	Overweight	\$85	61%	\$52.7	10%	-3%	1,826	695	31	1,162
KYMR	Kymera Therapeutics, Inc.	Overweight	\$79	67%	\$47.3	58%	29%	3,080	463	86	2,703
LEGN	Legend Biotech Corp. Sponsored ADR	Overweight	\$80	111%	\$37.9	-46%	4%	6,962	1,005	363	6,319
LYEL	Lyell Immunopharma, Inc.	Equal-Weight	NA	NA	\$9.7	-67%	-16%	144	301	57	(100)
RXR	Recursion Pharmaceuticals, Inc. Class A	Equal-Weight	\$8	55%	\$5.2	-31%	-39%	2,066	504	93	1,656
SAGE	SAGE Therapeutics, Inc.	Equal-Weight	\$9	36%	\$6.6	-75%	-8%	413	424	12	1
SANA	Sana Biotechnology, Inc.	Overweight	\$12	372%	\$2.5	-60%	-10%	573	109	91	555
SDGR	Schrodinger, Inc.	Equal-Weight	\$31	36%	\$22.8	-46%	-7%	1,466	512	116	1,070
VTYX	Ventyx Biosciences, Inc.	Equal-Weight	NA	NA	\$2.5	-11%	48%	177	229	11	(41)
ZBIO	Zenas BioPharma, Inc.	Overweight	\$35	209%	\$11.3	#N/A	59%	474	312	1	162



Biotechnology Coverage
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Friday, June 13, 2025

Morgan Stanley

U.S. SMID Biotech - MS estimates

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							2024	YTD				
AARD	Aardvark Therapeutics, Inc.	Overweight	\$29	162%		\$11	✓ #N/A	-23%	240	151	1	89
AKRO	Akero Therapeutics, Inc.	Overweight	\$84	57%		\$54	19%	93%	4,270	686	37	3,620
ALNY	Alnylam Pharmaceuticals, Inc.	Equal-Weight	\$287	-6%		\$305	23%	29%	39,725	2,632	2,722	39,815
ARWR	Arrowhead Pharmaceuticals, Inc.	Equal-Weight	\$29	79%		\$16	-39%	-14%	2,240	1,097	741	1,883
BIOA	BioAge Labs, Inc.	Underweight	\$5	11%		\$4	✓ -68%	-22%	161	321	10	(149)
CABA	Cabaletta Bio, Inc.	Overweight	\$22	1122%		\$2	-90%	-21%	91	132	29	(12)
DYN	Dyne Therapeutics Inc	Overweight	\$52	260%		\$14	77%	-39%	1,644	677	23	989
IOBT	IO Biotech, Inc.	Overweight	\$6	300%		\$2	-51%	63%	99	37	2	63
IONS	Ionis Pharmaceuticals, Inc.	Equal-Weight	\$52	46%		\$36	-31%	2%	5,669	2,148	1,958	5,479
KYTX	Kyverna Therapeutics, Inc.	Overweight	\$20	478%		\$3	✓ -88%	-7%	150	243	7	(86)
MIRM	Mirum Pharmaceuticals, Inc.	Overweight	\$70	43%		\$49	40%	19%	2,428	278	317	2,468
RCKT	Rocket Pharmaceuticals, Inc.	Equal-Weight	\$7	128%		\$3	-58%	-76%	331	318	25	38
RYTM	Rhythm Pharmaceuticals, Inc.	Overweight	\$80	27%		\$63	22%	13%	4,009	314	258	3,953
SLN	Silence Therapeutics PLC Sponsored ADR	Overweight	\$25	348%		\$6	-60%	-19%	264	137	0	127
SRPT	Sarepta Therapeutics, Inc.	Overweight	\$113	203%		\$37	26%	-69%	3,667	523	1,344	4,488
TNYA	Tenaya Therapeutics, Inc.	Overweight	\$5	732%		\$1	-56%	-58%	98	88	13	22
VIR	Vir Biotechnology, Inc.	Overweight	\$20	283%		\$5	-27%	-29%	722	890	96	(72)
VKTX	Viking Therapeutics, Inc.	Overweight	\$102	257%		\$29	116%	-29%	3,210	852	1	2,359
YMAB	Y-mAbs Therapeutics, Inc.	Underweight	\$7	51%		\$5	15%	-41%	210	60	1	150
ZNTL	Zentalis Pharmaceuticals, Inc.	Equal-Weight	\$8	448%		\$1	-80%	-52%	105	332	39	(189)



Biotechnology Coverage

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Friday, June 13, 2025

U.S. SMID Biotech - MS estimates

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						2024	YTD				
ABVX	Abivax SA Sponsored ADR	Equal-Weight	\$12	71%	\$7.0	-32%	-2%	459	149	100	409
ACLX	Arcellx, Inc.	Overweight	\$111	67%	\$66.5	38%	4%	3,665	543	53	3,175
APLS	Apellis Pharmaceuticals, Inc.	Equal-Weight	\$25	30%	\$19.3	-47%	-30%	2,421	360	470	2,530
BCAX	Bicara Therapeutics Inc.	Overweight	\$36	211%	\$11.6	#N/A	-12%	631	462	1	170
BPMC	Blueprint Medicines Corp.	Equal-Weight	\$129	1%	\$128.2	-5%	35%	8,291	576	713	8,428
CLDX	Celldex Therapeutics, Inc.	Overweight	\$43	111%	\$20.4	-36%	-12%	1,351	667	3	687
ENGN	enGene Holdings Inc.	Overweight	\$19	485%	\$3.3	-28%	-48%	166	217	25	(26)
FDMT	4D Molecular Therapeutics, Inc.	Underweight	NA	-	\$4.5	-73%	-5%	208	321	24	(89)
GLPG	Galapagos NV Sponsored ADR	Underweight	\$22	-24%	\$28.9	-32%	13%	1,896	3,562	12	(1,654)
MURA	Mural Oncology Plc	Equal-Weight	NA	NA	\$2.5	-46%	-41%	44	108	7	(57)
PROK	ProKidney Corp. Class A	Equal-Weight	\$3	235%	\$0.9	-5%	-44%	116	328	3	(209)
PTCT	PTC Therapeutics, Inc.	Overweight	\$70	37%	\$51.0	64%	3%	4,041	2,027	390	2,403
RGNX	REGENXBIO, Inc.	Overweight	\$24	135%	\$10.2	-57%	39%	512	268	134	377



Biotechnology Coverage

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Friday, June 13, 2025

Morgan Stanley

U.S. SMID Biotech - MS estimates

Ticker	Company Name	Rating	PT	Up/Down	Latest Price	Price performance		Market Cap (\$M)	Cash (\$M)	Debt (\$M)	Enterprise Value (\$M)
						2024	YTD				
ADAG	Adagene, Inc. Sponsored ADR	Equal-Weight	NA	NA	\$1.96	3%	-2%	92	85	18	26
AVIR	Atea Pharmaceuticals, Inc.	Equal-Weight	\$6	87%	\$3.21	10%	-4%	275	425	1	(149)
BCYC	Bicycle Therapeutics Plc Sponsored ADR	Equal-Weight	\$17	96%	\$8.69	-23%	-38%	415	793	9	(369)
CRNX	Crinetics Pharmaceuticals Inc	Overweight	\$65	102%	\$32.17	44%	-37%	3,014	1,275	51	1,790
CYTK	Cytokinetics, Incorporated	Overweight	\$65	96%	\$33.20	-44%	-29%	3,965	939	791	3,817
FOLD	Amicus Therapeutics, Inc.	Equal-Weight	\$12	94%	\$6.17	-34%	-35%	1,900	251	443	2,093
INSM	Insmed Incorporated	Overweight	\$102	5%	\$96.88	123%	40%	17,646	1,199	1,310	17,756
PHVS	Pharvaris N.V.	Overweight	\$34	97%	\$17.23	-32%	-10%	939	255	1	684
RARE	Ultragenyx Pharmaceutical, Inc.	Overweight	\$65	65%	\$39.29	-12%	-7%	3,715	503	890	4,101
TCRX	TScan Therapeutics, Inc.	Overweight	\$10	521%	\$1.61	-48%	-47%	84	252	97	(70)

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Global Stock Ratings Distribution

(as of May 31, 2025)

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Stock Rating Category	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1493	40%	379	46%	25%	698	41%
Equal-weight/Hold	1650	44%	372	45%	23%	782	46%
Not-Rated/Hold	4	0%	0	0%	0%	2	0%
Underweight/Sell	602	16%	74	9%	12%	235	14%
Total	3,749		825			1717	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

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Disclosure Section (cont.)

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INDUSTRY COVERAGE: Biotechnology

COMPANY (TICKER)	RATING (AS OF)	PRICE* (06/12/2025)
Judah C. Frommer, CFA		
4D Molecular Therapeutics Inc (FDMT.O)	U (11/21/2024)	\$4.50
Abivax (ABVX.O)	E (11/14/2023)	\$7.02
Apellis Pharmaceuticals Inc (APLS.O)	E (11/21/2024)	\$19.26
Arcellx Inc (ACLX.O)	O (03/07/2024)	\$66.51
Bicara Therapeutics (BCAX.O)	O (10/08/2024)	\$11.57
Blueprint Medicines Corporation (BPMC.O)	E (03/20/2025)	\$128.21
Celldex Therapeutics Inc (CLDX.O)	O (03/20/2025)	\$20.35
enGene Holdings Inc. (ENGN.O)	O (03/08/2024)	\$3.25
Galapagos NV (GLPG.O)	U (02/13/2025)	\$28.87
Mural Oncology (MURA.O)	E (03/25/2025)	\$2.53
ProKidney Corp (PROK.O)	E (11/10/2022)	\$0.90
PTC Therapeutics (PTCT.O)	O (03/06/2025)	\$50.98
Regenxbio Inc (RGNX.O)	O (11/15/2024)	\$10.20
Maxwell Skor		
Adagene Inc. (ADAG.O)	E (01/30/2025)	\$1.96
Amicus Therapeutics Inc. (FOLD.O)	E (12/12/2024)	\$6.17
Atea Pharmaceuticals Inc (AVIR.O)	E (08/12/2024)	\$3.21
Bicycle Therapeutics Plc (BCYC.O)	E (02/14/2022)	\$8.69
Crinetics Pharmaceuticals (CRNX.O)	O (01/16/2024)	\$32.17
Cytokinetics Inc (CYTK.O)	O (02/13/2025)	\$33.20
Insmid Inc (INSM.O)	O (10/19/2021)	\$96.88
Pharvaris N.V. (PHVS.O)	O (08/15/2023)	\$17.23
Tscan Therapeutics Inc (TCRX.O)	O (03/13/2025)	\$1.61
Ultragenyx Pharmaceutical Inc (RARE.O)	O (03/27/2019)	\$39.29

Michael E Ulz

Aardvark Therapeutics Inc. (AARD.O)	O (03/10/2025)	\$11.06
Akero Therapeutics Inc (AKRO.O)	O (01/27/2023)	\$53.56
Alnylam Pharmaceuticals Inc (ALNY.O)	E (09/09/2022)	\$304.67
Arrowhead Pharmaceuticals Inc (ARWR.O)	E (09/09/2022)	\$16.22
BioAge Labs Inc (BIOA.O)	U (12/09/2024)	\$4.49
Cabaletta Bio Inc (CABA.O)	O (01/27/2023)	\$1.80
Dyne Therapeutics Inc (DYN.O)	O (04/30/2024)	\$14.46
Fractyl Health Inc (GUTS.O)	O (02/27/2024)	\$2.17
IO Biotech (IOBT.O)	O (11/30/2021)	\$1.50
Ionis Pharmaceuticals Inc (IONS.O)	E (12/21/2022)	\$35.62
Kyverna Therapeutics (KYTX.O)	O (03/04/2024)	\$3.46
Mirum Pharmaceuticals (MIRM.O)	O (11/13/2023)	\$49.02
Rhythm Pharmaceuticals Inc (RYTM.O)	O (12/19/2023)	\$63.02
Rocket Pharmaceuticals Inc (RCKT.O)	E (05/27/2025)	\$3.07
Sarepta Therapeutics Inc (SRPT.O)	O (03/01/2023)	\$37.31
Silence Therapeutics Plc (SLN.O)	O (05/08/2023)	\$5.59
Tenaya Therapeutics Inc (TNYA.O)	O (08/24/2021)	\$0.60
Viking Therapeutics Inc (VKT.X.O)	O (06/27/2024)	\$28.58
Vir Biotechnology Inc (VIR.O)	O (01/08/2025)	\$5.22
Y-mAbs Therapeutics Inc. (YMAB.O)	U (01/27/2023)	\$4.63
Zentalis Pharmaceuticals Inc (ZNTL.O)	E (06/18/2024)	\$1.46
Sean Laaman, Ph.D.		
Acadia Pharmaceuticals Inc (ACAD.O)	E (08/06/2024)	\$21.74
Alector Inc (ALEC.O)	U (11/26/2024)	\$1.62
BeOne Medicines (ONC.O)	O (12/02/2024)	\$276.53
Centessa Pharmaceuticals, Inc (CNTA.O)	O (09/19/2024)	\$12.04
CG Oncology (CGON.O)	O (02/19/2024)	\$26.50

Disclosure Section (cont.)

Contineum Therapeutics (CTNM.O)	O (04/30/2024)	\$4.63
Cullinan Therapeutics (CGEM.O)	O (03/06/2025)	\$8.95
Denali Therapeutics Inc (DNLI.O)	O (03/06/2025)	\$14.93
Erasca, Inc. (ERAS.O)	O (02/03/2023)	\$1.53
Exelixis Inc. (EXEL.O)	O (01/26/2025)	\$41.78
Halozyne Therapeutics, Inc (HALO.O)	E (05/14/2025)	\$54.54
Immunocore Holdings Ltd (IMCR.O)	E (12/12/2024)	\$35.63
Neurocrine Biosciences Inc (NBIX.O)	O (03/06/2025)	\$125.01

Terence C Flynn, Ph.D.

Alumis Inc. (ALMS.O)	O (05/30/2025)	\$3.18
Amgen Inc. (AMGN.O)	E (10/16/2023)	\$297.29
Arcus Biosciences Inc. (RCUS.N)	O (10/11/2022)	\$9.35
Arvinas Inc (ARVN.O)	E (04/06/2022)	\$7.57
Biogen Inc (BIIB.O)	E (10/31/2024)	\$132.31
Biohaven Ltd (BHV.N)	O (07/24/2024)	\$15.59
BioNTech SE (BNTX.O)	O (09/23/2024)	\$104.92
C4 Therapeutics (CCCC.O)	E (11/06/2023)	\$1.62
CRISPR Therapeutics AG (CRSP.O)	U (10/11/2022)	\$41.28
Gilead Sciences Inc. (GILD.O)	O (01/10/2025)	\$112.05
Intellia Therapeutics Inc (NTLA.O)	E (01/26/2025)	\$8.35
Moderna Inc (MRNA.O)	E (12/16/2020)	\$27.35
Nurix Therapeutics Inc. (NRIX.O)	E (10/11/2022)	\$11.96
Prime Medicine Inc (PRME.O)	E (11/14/2022)	\$1.46
Regeneron Pharmaceuticals Inc. (REGN.O)	O (09/09/2022)	\$521.84
Structure Therapeutics Inc (GPCR.O)	O (09/22/2024)	\$22.22
United Therapeutics Corp (UTHR.O)	E (07/11/2024)	\$286.14
Vertex Pharmaceuticals (VRTX.O)	E (05/03/2022)	\$460.06

Vikram Purohit

ABSCI CORP (ABSI.O)	O (07/03/2024)	\$2.84
Arcutis Biotherapeutics, Inc. (ARQT.O)	O (11/19/2021)	\$13.50
argenx SE (ARGX.O)	O (05/03/2022)	\$586.76
Ascendis Pharma A/S (ASND.O)	O (05/05/2025)	\$170.92
Axsome Therapeutics (AXSM.O)	O (04/29/2024)	\$106.25
Biomarin Pharmaceutical Inc (BMRN.O)	O (04/25/2022)	\$57.28
Certara Inc (CERT.O)	E (01/05/2021)	\$11.18
Compass Pathways PLC (CMPS.O)	O (04/01/2024)	\$4.52
Disc Medicine Inc (IRON.O)	O (11/04/2024)	\$52.71
Foghorn Therapeutics (FHTX.O)	E (08/23/2022)	\$4.54
Genmab A/S (GMAB.O)	E (09/04/2024)	\$23.09
Incyte Corp (INCY.O)	E (04/29/2020)	\$69.22
Kymera Therapeutics Inc (KYMR.O)	O (06/02/2025)	\$47.29
Legend Biotech Corp (LEGN.O)	O (01/31/2022)	\$37.91
Lyell Immunopharma, Inc. (LYEL.O)	E (11/14/2022)	\$9.74
Recursion Pharmaceuticals Inc (RXRX.O)	E (05/22/2023)	\$5.17
SAGE Therapeutics Inc (SAGE.O)	E (11/16/2020)	\$6.60
Sana Biotechnology, Inc (SANA.O)	O (03/01/2021)	\$2.54
Schrodinger Inc. (SDGR.O)	E (11/19/2021)	\$22.84
Ventyx Biosciences (VTYX.O)	E (11/07/2023)	\$2.49
Zenas Biopharma Inc (ZBIO.O)	O (10/08/2024)	\$11.32

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