The Quarterly Rx: Q3 2025 U.S. Biopharma Recap

October 2025

William Blair

Q3 2025 U.S. Biopharma Market Summary – Key Takeaways

Biopharma sentiment improved into Q3's close, supported by a wave of public M&A, positive clinical news, the year's first rate cut, and clarity around tariffs and drug pricing policy

Back To School: Time to Cell-ebrate?

- Major U.S. indices hit record highs in Q3 as the Fed kicked off its long-awaited easing cycle; investors are pricing in up to two more rate cuts this year and two more in 2026, setting the stage for a more encouraging financing environment
- The XBI closed the quarter at $100, gaining 21% in Q3 and is up 11% year-to-date; while still trailing broader markets, the performance is an encouraging sign of improving sentiment
- While healthcare/biotech-dedicated funds have experienced approximately $12.2 billion of net outflows in 2025, a friendly macro backdrop could help turn the tide
- Drug pricing and tariff-related headwinds have improved following PFE's announcement with the Trump administration and large pharma commitments to U.S. manufacturing

Crossovers Still on Summer Break

- Private financing activity showed early signs of recovery in Q3, with 56 deals announced totaling $4.8 billion in proceeds, slightly above Q2 but trailing early-year highs
- 36% of Series B or later financings in 2025YTD have been co-led, with half of those deals involving an existing investor as one of the leads, reflecting syndication risk and the need for insiders to increasingly step-up and support their portfolio companies
- "Crossover" activity stayed muted in 2025 with only seven financings announced raising $1.2 billion in total proceeds along with a meaningful decrease in the number of new investors; however, if public valuations continue to firm up and IPOs make a comeback, we expect crossover activity to pick back up
- Fundraising stood out in Q3 with $6.1 billion in newly raised capital across 10 life science funds, an encouraging sign of LP commitment to the sector despite recent headwinds

Public Fundraising – Who is Making the Honor Roll

- Q3 saw the first biopharma IPO since February 2025, ending the longest IPO drought in the sector since the Great Financial Crisis; additional pricings are expected in Q4 and early 2026
- Secondary activity (FO/PIPE/RDs) was more active in Q3 than recent quarters with 49 financings announced raising $7.1 billion in total proceeds with our recent investor conversations highlighting continued appetite from investors for catalyst-driven offerings, accounting for 71% this quarter's activity
- Median deal size activity increased to $86.3 million and aftermarket performance has been resilient with 84% of offerings holding or gaining post-pricing
- Investors and companies alike rewarded for "positive" clinical data this quarter, with an average 1-day performance of over +40%; four of the top 10 stock movers this quarter were for recent IPOs (ABVX, RAPP, MBX, MAZE)

Cramming to Return (and Preserve) Capital

- Only one reverse merger announced as investors and Board members continue to favor strategic alternative outcomes that return capital; all seven financially-driven take privates this quarter were done by Concentra or XOMA Royalty/XOMA-backed entities, unlocking $1.2B of net cash
- Notably, 10 distressed biopharma companies announced cryptocurrency treasury strategies in Q3 (compared to one in H1 2025)
- 88 public biopharma companies trade at negative EV as of September 30th, 2025, down from 132 at the start of 2025, signaling a healthier overall environment; 31% of all public biopharma companies still have <12 months of cash

New Semester, New Synergies for Strategics

- Steady pace of M&A activity in Q3, with 24 transactions totaling $40 billion in total deal activity, pushing year-to-date total deal value ahead of all of 2024
- Meaningful public company M&A (>$1 billion in deal value) rebounded in Q3, with six transactions announced freeing up ~$22 billion of institutional capital; Verona's $10 billion takeout by Merck was the largest deal this quarter and second largest deal in 2025YTD
- Partnering activity in Q3 2025 generated $2.5 billion in total upfronts, driven by continued large east-west partnerships and multi-target collaborations

NBI® Subsector Market Performance

Biopharma rallied across market caps, therapeutic areas, and modalities in Q3 as the NBI posted its best quarterly performance since Q2 2020. For the second consecutive quarter small-caps led the way and are now outperforming mid and large caps both YTD and on an LTM basis

Subsector Category		Q3 2025 Performance	2025YTD Performance	LTM Performance
Market Cap	Small Cap (<$2bn)	42.0%	18.8%	14.6%
	Mid Cap ($2-10bn)	23.5%	15.8%	8.8%
	Large Cap (>$10bn)	12.1%	10.4%	1.0%
Stage of Development	Clinical (N=128)	43.7%	8.7%	(7.6%)
	Commercial (N=105)	29.6%	27.7%	34.5%
Therapeutic Area	Ophthalmology (N=10)	64.9%	46.3%	43.1%
	Cardiovascular (N=18)	63.9%	43.5%	26.2%
	Blood (Non-oncology) (N=11)	61.6%	62.6%	109.2%
	Neurology (N=51)	53.2%	19.3%	33.1%
	Musculoskeletal (N=13)	49.9%	(9.5%)	1.6%
	NASH (N=7)	48.9%	40.3%	39.1%
	Rare Disease (N=58)	48.6%	24.5%	32.0%
	Pulmonology & Respiratory (N=12)	47.2%	38.1%	41.5%
	Liver (All) (N=16)	42.6%	27.3%	14.6%
	Neuropsych/ Mood Disorders (N=14)	42.3%	18.8%	33.1%
	Endocrine & Metabolic (N=15)	42.1%	32.2%	26.3%
	Renal (N=5)	40.9%	19.6%	18.3%
	Inflammation & Immunology (N=39)	33.0%	14.1%	(3.1%)
	Oncology (N=75)	30.7%	3.7%	(15.8%)
	Infectious Disease (N=16)	9.8%	8.1%	1.5%
Modality	Gene Editing (N=6)	68.4%	74.7%	13.2%
	Gene Therapy (N=15)	58.9%	30.1%	73.9%
	RNA/Oligos (N=18)	44.7%	7.6%	(8.4%)
	Precision & Targeted Onc. (N=25)	37.9%	10.0%	(19.1%)
	Multi-specific Ab's & Engagers (N=11)	36.2%	10.9%	4.7%
	ADCs (N=9)	32.2%	(9.2%)	(24.9%)
	Protein Degradation (N=5)	29.2%	(19.5%)	(25.2%)
	Cell Therapy (N=23)	27.4%	(0.1%)	(8.0%)
	I/O (N=18)	20.5%	0.2%	(3.0%)
	Vaccines (N=8)	14.8%	(6.0%)	(18.7%)

Source: FactSet and William Blair internal reporting. Therapeutic area and modality based on William Blair analysis.
Note: Market capitalizations are as of the first trading day of each graph's performance period. YTD = Year-to-date. LTM = Last twelve months.
Subsector indices are equally weighted and averaged. Includes NBI® constituents' as of September 30, 2025, and excludes non-therapeutic focused companies in the NBI®.

NBI® Subsector Q3 2025 Short Interest Trends

Short interest rose across market caps in Q3 2025, with a notable surge among large-cap companies, while trends were mixed across therapeutic areas and modalities

Subsector Category		Days to Cover Short Position	Q3 2025 Change in Short Interest
Market Cap	Large Cap (>$10bn)	4.3	13.4%
	Mid Cap ($2-10bn)	7.5	2.1%
	Small Cap (<$2bn)	8.3	0.2%
Stage of Development	Commercial (N=128)	6.5	3.2%
	Clinical (N=105)	9.1	0.2%
Therapeutic Area	Liver (All) (N=16)	9.2	10.0%
	Infectious Disease (N=16)	8.4	9.7%
	Pulmonology & Respiratory (N=12)	6.5	5.7%
	Rare Disease (N=58)	7.9	5.0%
	Musculoskeletal (N=13)	8.2	4.7%
	Ophthalmology (N=10)	8.2	2.6%
	NASH (N=7)	7.2	0.7%
	Neurology (N=51)	7.8	(0.2%)
	Oncology (N=75)	8.8	(0.2%)
	Endocrine & Metabolic (N=15)	7.0	(0.8%)
	Inflammation & Immunology (N=39)	9.6	(2.0%)
	Blood (Non-oncology) (N=11)	6.8	(2.3%)
	Cardiovascular (N=18)	6.6	(4.0%)
	Neuropsych/ Mood Disorders (N=14)	7.4	(9.0%)
	Renal (N=5)	4.6	(16.3%)
Modality	I/O (N=18)	9.4	9.2%
	Multi-specific Ab's & Engagers (N=11)	11.0	8.8%
	Gene Therapy (N=15)	7.2	8.5%
	RNA/Oligos (N=18)	8.4	4.7%
	Vaccines (N=8)	7.5	3.4%
	ADCs (N=9)	6.7	(0.9%)
	Gene Editing (N=6)	6.4	(1.2%)
	Precision & Targeted Onc. (N=25)	10.6	(1.6%)
	Protein Degradation (N=5)	8.2	(3.2%)
	Cell Therapy (N=23)	8.2	(6.9%)

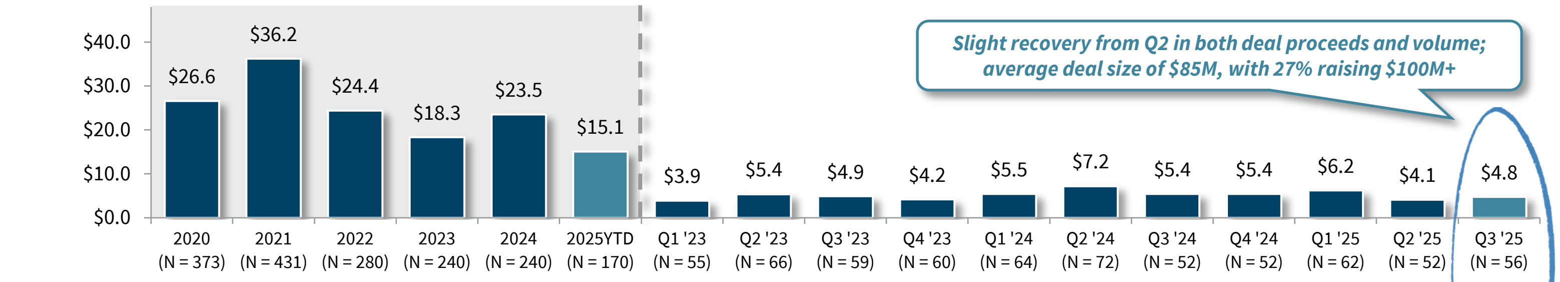
Source: FactSet, CapIQ, and William Blair internal reporting.
Note: NBI® constituents are equally weighted and averaged. Excludes non-therapeutic focused companies in the NBI®. Market capitalizations are as of the first trading day of the quarter. Days to cover short position calculated as total number of shares shorted / 3-month ADTV. Days to cover short position as of 9/15/25 settlement date. Short interest change measured from 6/13/25 to 9/15/25 settlement dates.

Biopharma Private Financings Trends

- Deal activity showed early signs of recovery with Q3 2025 proceeds reaching $4.8B across 56 deals, slightly above Q2 but trailing early-year highs
- The mega-deal trend continued this quarter, with fewer but larger deals and 13% of financings reaching $200M+ in proceeds raised

Total Proceeds and Deal Volume

($ in billions)



	2020	2021	2022	2023	2024	2025YTD	Q1 '23	Q2 '23	Q3 '23	Q4 '23	Q1 '24	Q2 '24	Q3 '24	Q4 '24	Q1 '25	Q2 '25	Q3 '25
% Deals ≥$100M	**21%**	**29%**	**27%**	**26%**	**39%**	**28%**	**27%**	**29%**	**27%**	**22%**	**33%**	**32%**	**48%**	**46%**	**29%**	**29%**	**27%**
% Deals ≥$200M	**3%**	**6%**	**5%**	**6%**	**8%**	**9%**	**2%**	**8%**	**10%**	**3%**	**3%**	**11%**	**8%**	**8%**	**13%**	**2%**	**13%**

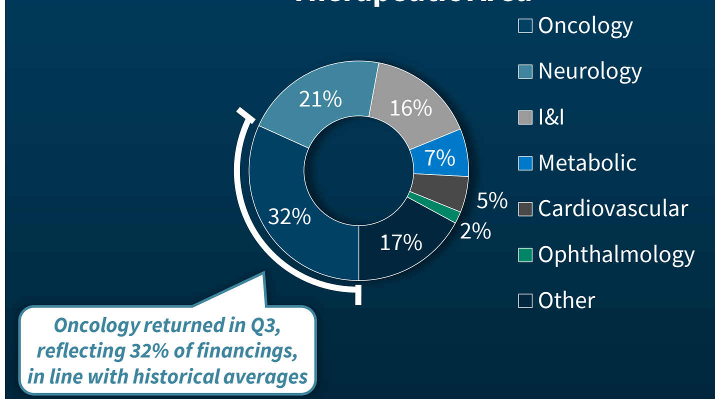
Analysis by Series Round

($ in millions, deal size represents mean, includes extension rounds)

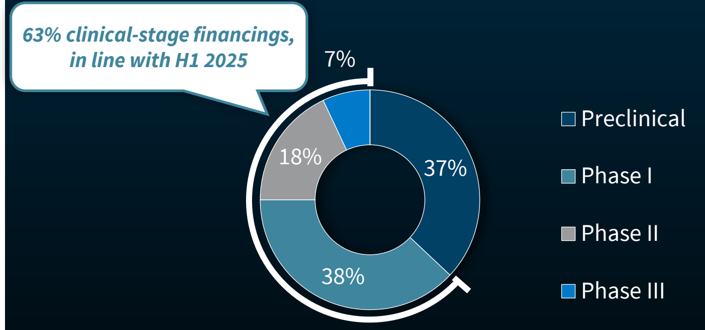
	2024				H1 2025				Q3 2025			
Series Round	**Deal Size**	**Series Count**	**% Ext. Rounds**	**% Clin. Stage**	**Deal Size**	**Series Count**	**% Ext. Rounds**	**% Clin. Stage**	**Deal Size**	**Series Count**	**% Ext. Rounds**	**% Clin. Stage**
Series A	$100	102	15%	32%	$97	46	15%	43%	$74	24	29%	46%
Series B	$87	79	20%	59%	$76	36	17%	64%	$71	18	17%	72%
Series C	$99	39	13%	79%	$88	18	11%	78%	$57	6	17%	100%
Series D+	$129	20	0%	85%	$110	14	14%	100%	$172	8	0%	63%
All Rounds	**$98**	**240**	**15%**	**53%**	**$91**	**114**	**15%**	**62%**	**$85**	**56**	**20%**	**63%**

Q3 2025 Analysis by TA and Stage

Therapeutic Area



Stage of Development

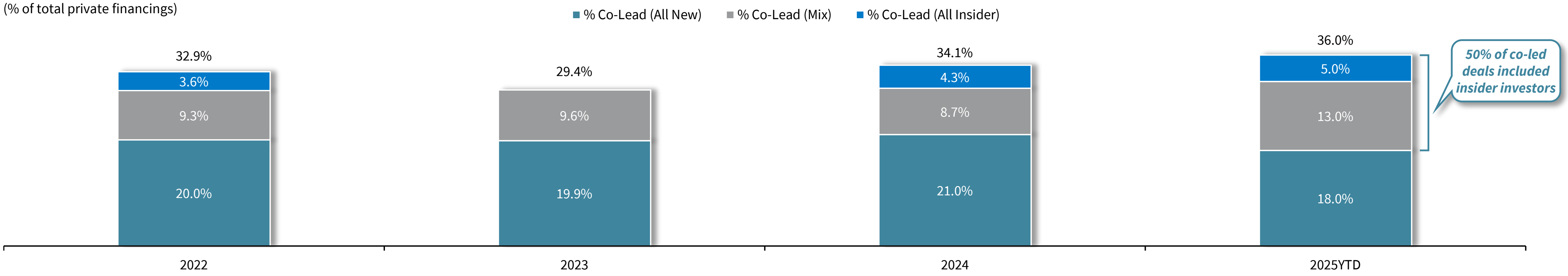


Source: CapIQ, PitchBook Data, Inc., and SEC Filings as of September 30, 2025.
Note: Includes Series A and later private financing deals and extension rounds with a minimum disclosed deal size of $20M, involving at least one U.S./EU healthcare investor.
Ext = Extensions.

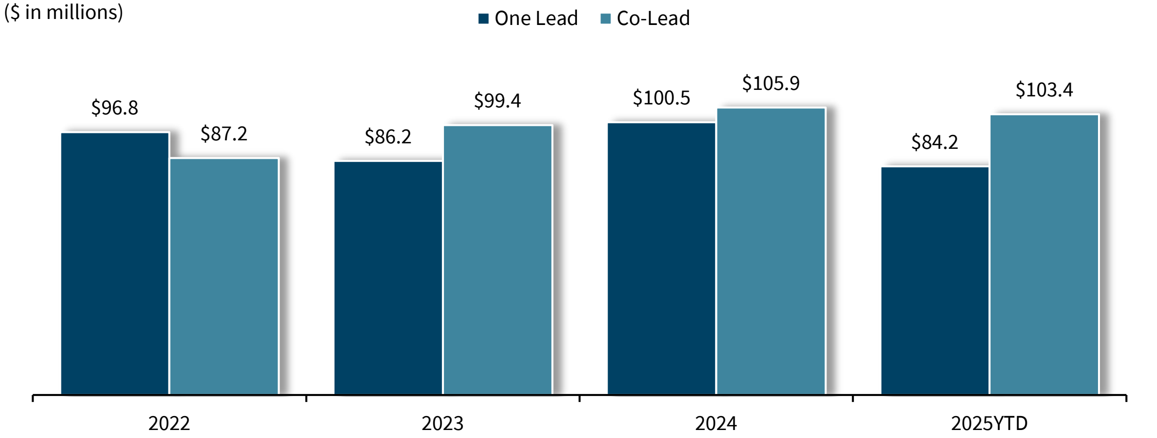
Increase in Biopharma Private Financings with Co-Lead Investors

- Higher rates of co-led financings across Series B and later rounds as syndication risk remains elevated
- Amongst co-led financings in 2025YTD, 50% have an existing investor as one of the leads

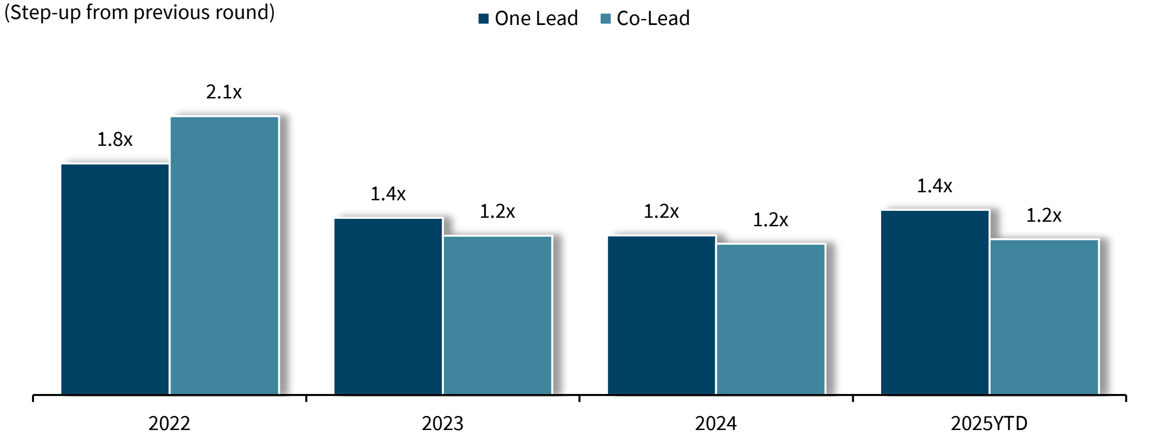
% of Private Financings with Co-Lead Investors



Co-Led Deals Have Meaningfully Higher Average Deal Sizes



Co-Led Deals Have Slightly Lower Average Step-ups



Source: Company Filings and PitchBook Data, Inc. as of September 30, 2025.
Note: Includes Series B and later private financing deals and extension rounds with a minimum disclosed deal size of $20M, involving at least one U.S./EU healthcare investor.

Biopharma Crossover Financing Trends

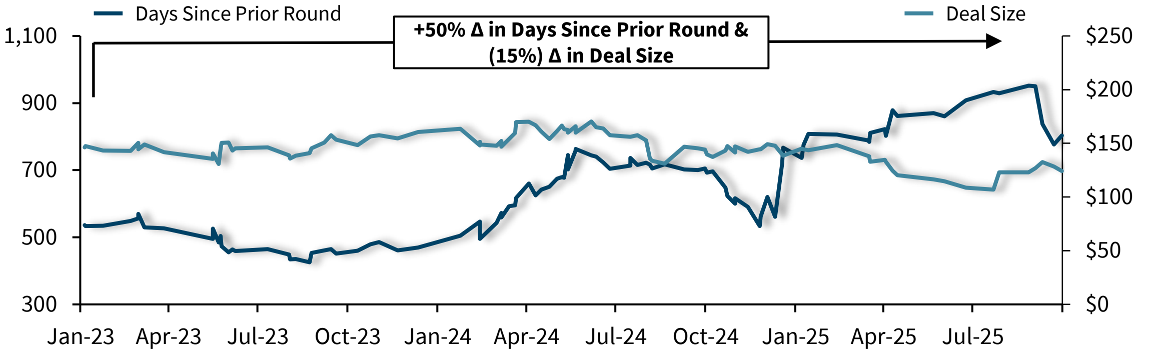
- Q3 2025 extends the slowdown in crossover rounds seen all year, with seven deals announced raising ~$1.2B in proceeds
- Deals are increasingly reliant on insiders, with median new investor participation dropping to 4 in 2025YTD from 6 in 2024

Q3 2025 Crossovers

($ in millions)

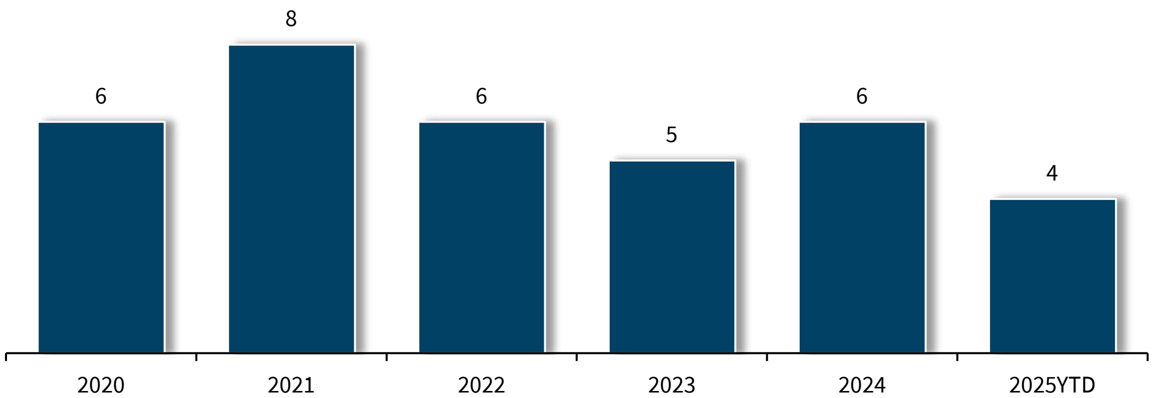
Date	Company	Series	Deal Size	Lead Investors	Days Since Prior Round	Stage	Modality	Therapeutic Area
9/30/25	STAR Therapeutics	Series D	$125	sanofi ventures, Viking	756	Phase III	Antibody	Hematology
9/22/25	Avenzo Therapeutics	Series B	$60	orbimed, SR One	308	Phase I	Small Molecule	Oncology
9/10/25	Odyssey Therapeutics	Series D	$213	SR One	645	Phase IIa	Small Molecule	I&I
9/3/25	Treeline	Series A Extension	$200	andreessen horowitz	321	Phase I	Protein Degrader	Oncology
8/27/25	Wugen	Series C	$115	Fidelity Investments	1,510	Pivotal Phase II	Cell Therapy	Oncology
7/28/25	MapLight	Series D	$373	Forbion Ventures, Goldman Sachs	637	Phase II	Small Molecule	Neurology
7/22/25	avalyn pharma	Series D	$100	SR One, Suvretta	664	Phase IIb	Small Molecule	Pulmonary, Fibrosis

Rolling Average of Last 20 Crossover Deals by[1]



Median No. of New Investors in Crossover Rounds

(Median number of announced new investors)



Crossover Deals Analysis

($ in millions)

Quarter	Number of Deals	Median Deal Size	Median Pre-Money	Median Step-Up	Currently Public	Acquired
Q3 2025	7	$125	$444	1.0x	0	0
Q2 2025	7	$90	$190	1.0x	0	0
Q1 2025	7	$110	$284	1.0x	0	0
Q4 2024	13	$120	$335	1.5x	2	0
Q3 2024	10	$135	$287	1.2x	2	3
Q2 2024	15	$133	$206	1.3x	2	0
Q1 2024	10	$160	$264	0.6x	4	2
Q4 2023	5	$165	$184	1.0x	2	1
Q3 2023	9	$150	$244	1.2x	4	1
Q2 2023	8	$145	$309	1.2x	2	1
Q1 2023	8	$136	$161	1.3x	3	3

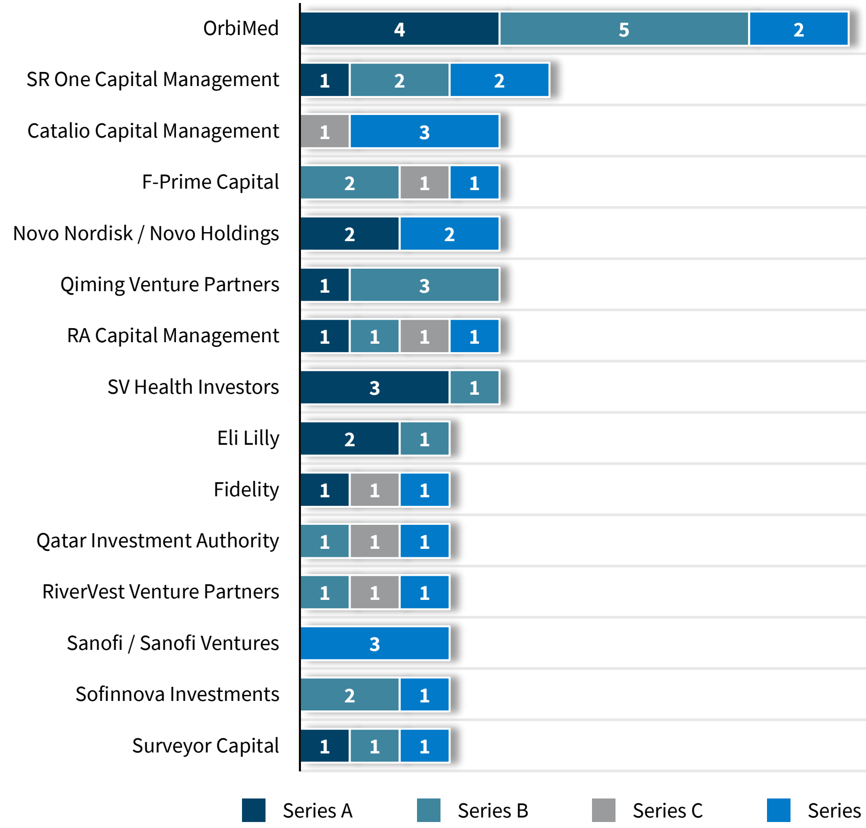
Crossover activity remains muted in 2025, following a strong 2024

Source: CapIQ, PitchBook Data, Inc., and SEC Filings as of September 30, 2025. ND = Not Disclosed.
Note: Includes crossover rounds for companies that have completed an IPO as well as crossover rounds where the next round of financing will likely be an IPO: either a $50M+ raise (Series B onwards) or a $100M+ raise (Series A) with multiple crossover and/or large mutual funds in the syndicate). Lead asset information shown.
(1) 20-deal rolling average of 2023-2025YTD crossover deals.

Q3 2025 Most Active Private Biopharma Investors and New Funds Closed

- OrbiMed was the most active private investor in Q3 2025; majority of activity focused on supporting existing portfolio companies
- New life sciences fund formation rebounded in Q3, reaching $6.1B after a weak start to 2025 (up from $2.7B in Q1 and $1.8B in Q2), an encouraging sign of sustained LP commitment to the sector despite recent headwinds

Most Active Investors



Investor	% New	% Lead
OrbiMed	18%	18%
SR One Capital Management	40%	100%
Catalio Capital Management	0%	0%
F-Prime Capital	0%	0%
Novo Nordisk / Novo Holdings	25%	25%
Qiming Venture Partners	50%	75%
RA Capital Management	25%	50%
SV Health Investors	75%	75%
Eli Lilly	67%	0%
Fidelity	33%	33%
Qatar Investment Authority	33%	0%
RiverVest Venture Partners	0%	0%
Sanofi / Sanofi Ventures	67%	33%
Sofinnova Investments	0%	33%
Surveyor Capital	33%	0%

Q3 2025 New Funds Closed

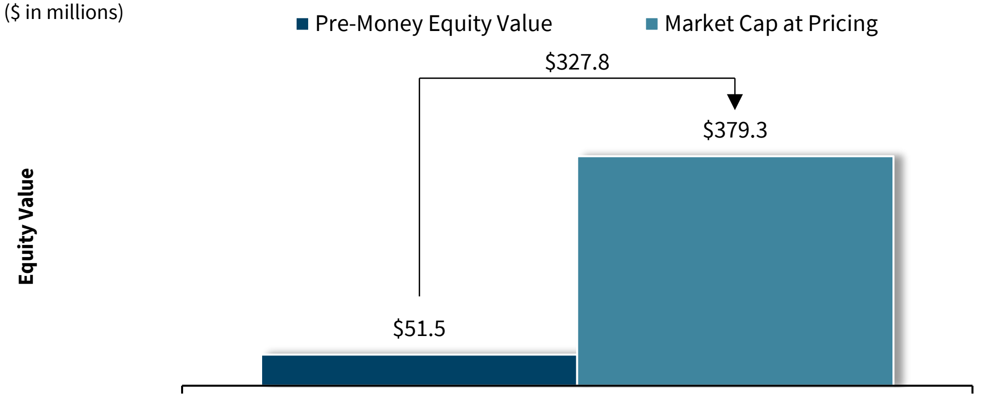
Investor	Fund Name	Close Date	Location	Fund Size ($M)
Catalio Capital Management	Catalio Nexus Fund IV	07/01/25	New York, NY	$400
AN Ventures	AN Venture Partners I	07/02/25	San Francisco, CA	$200
Hatteras Venture Partners	Hatteras Venture Partners VII and Opportunity Fund I	07/13/25	Durham, NC	$200
Omega Funds	Omega Fund VIII	07/21/25	Boston, MA	$647
Brandon Capital	Brandon Capital Fund VI+	07/24/25	Melbourne, Australia	$110
TCG Labs Soleil	TCG Labs Opportunity I+	07/24/25	San Francisco, CA	$400
Frazier Life Sciences	FLS XII	07/31/25	Seattle, WA	$1,300
orbimed	Royalty and Credit Opportunities Fund V	08/04/25	New York, NY	$1,860
Atlas Venture	Atlas Venture Opportunity Fund III	09/04/25	Cambridge, MA	$400
sanofi ventures	Evergreen Venture Fund+	09/24/25	Paris, France	$625
Total Fundraising				**$6.1B**

Source: PitchBook Data, Inc., and internal William Blair research as of September 30, 2025.
Note: Includes private financing deals and extension rounds with a minimum disclosed deal size of $20M, involving at least one U.S./EU healthcare investor. Excludes seed rounds. Fund names with a + denotes additional close to an initial raise. Fund formation includes most recent publicly disclosed fund raise over $100M in size for investors/funds focused on US-biopharma investments, including broader healthcare funds with life sciences investment personnel.

Q3 2025 Biopharma IPO Spotlight: LB pharmaceuticals

LB Pharma's IPO on September 11, 2025 was the first biopharma IPO to price since February 2025 and the sole IPO to price in Q3 2025, ending the longest biopharma IPO drought in the last 15 years

Deal Sizing and Valuation



Company Overview

- Late-stage clinical biopharma company focused on the development of novel therapies for schizophrenia, bipolar depression, and other neuropsychiatric diseases
- Lead asset, LB-102, is an oral benzamide antipsychotic designed to improve efficacy and tolerability in schizophrenia, with low off-target binding to reduce side effects and enhanced blood-brain barrier penetration enabling lower dosing and improved adherence
  - In January 2025, LB-102 achieved its primary endpoints in the Phase II NOVA trial, showing significant PANSS reductions with a 100mg effect size of 0.83 and a favorable tolerability profile, including low rates of EPS, sedation, and gastrointestinal side effects
- The company expects to initiate a pivotal Phase III trial of LB-102 in acute schizophrenia in Q1 2026 with topline data in H2 2027
- Completed $75 million crossover Series C financing in January 2024

Transaction Details

Deal Overview At Pricing		Post-IPO Performance	
Enterprise Value	$37.3	Offer/1 Day	+15.3%
Step-Up	**0.36x**	Offer/1 Week	+8.7%
Initial File/Offer vs. Range	In Range	Offer/Current	+5.3%
Deal Value as % of Market Value	86.4%	Months to Next Major Catalyst	21 – 27 months

Key Pre-IPO Investors

Deep Track Capital

Pontifax

TCGX

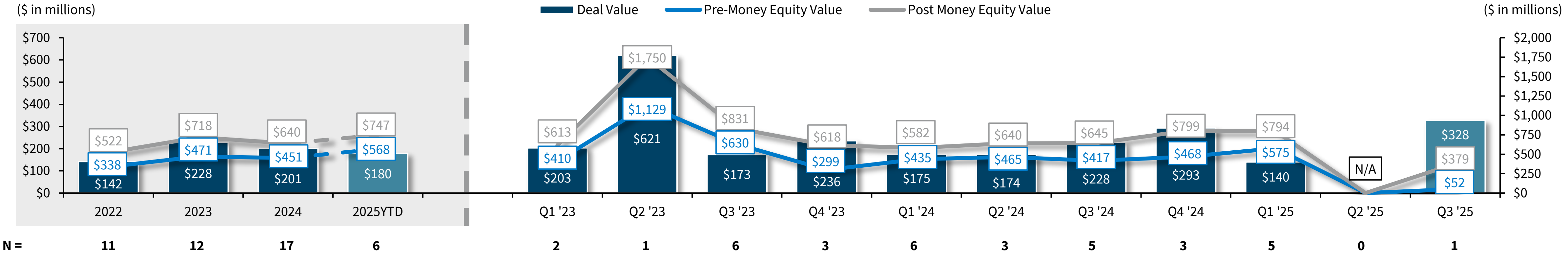
VIDA ventures

Source: Company Filings as of September 30, 2025.

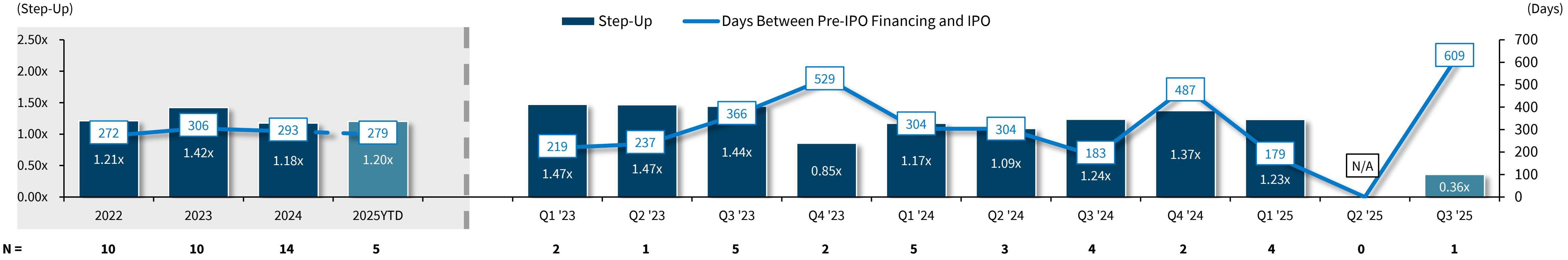
Biopharma IPO Trends

- 2025YTD median pre-money valuation remains slightly elevated at $568 million; though sample size is small as macro headwinds and MFN/tariff uncertainty have made the IPO market challenging for prospective new issuers
- One biopharma IPO publicly on file, MapLight Therapeutics; ongoing U.S. government shutdown may impact IPO activity in Q4 (no U.S. biopharma IPOs during last 35-day shutdown in 2018)

Deal Sizing and Valuation



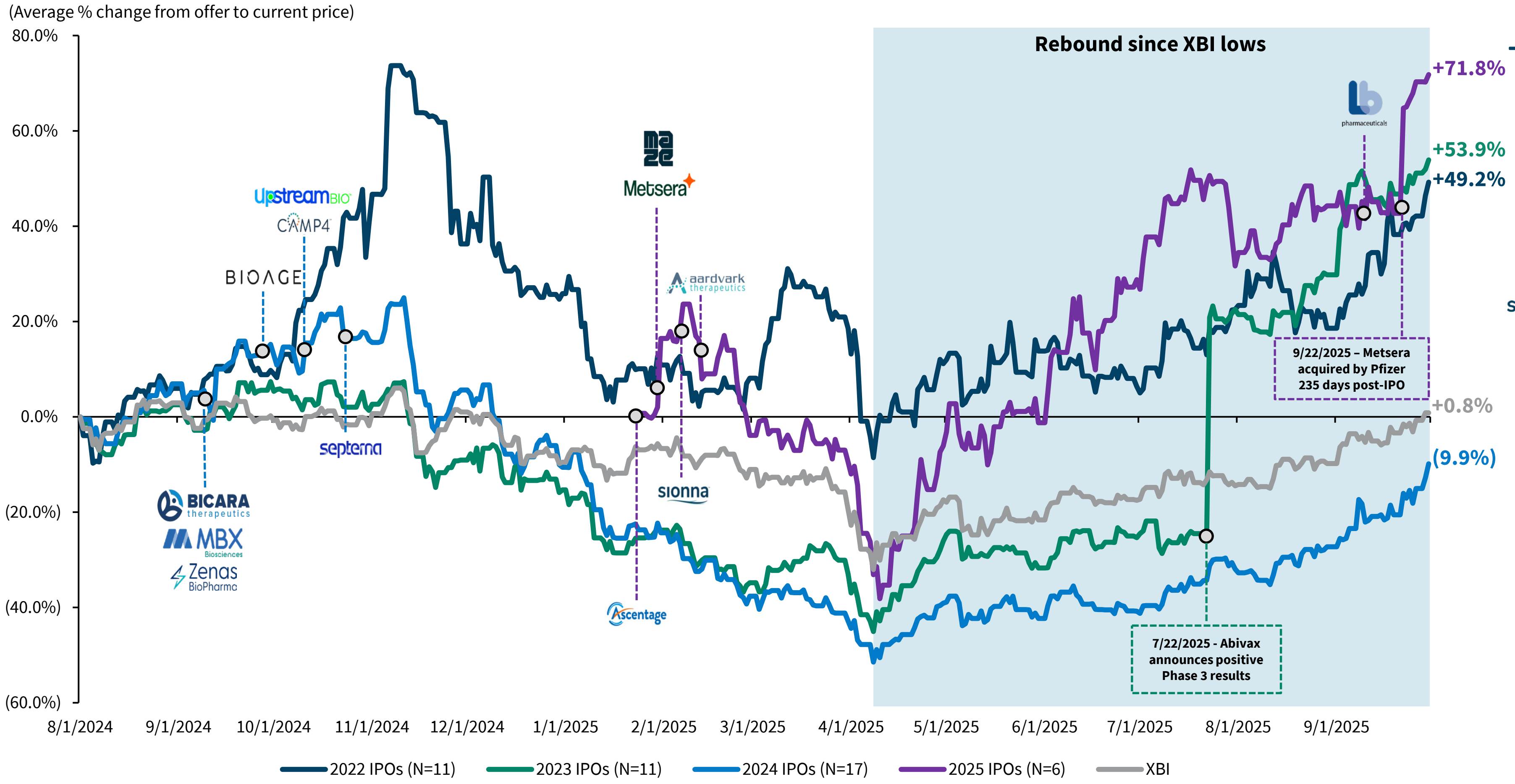
Crossover-to-IPO Metrics[1]



Source: CapIQ, Dealogic, FactSet, and SEC Filings as of September 30, 2025. Note: All valuations performed on basic share count basis.
Note: Represents median values. Includes U.S. IPOs only. Excludes best efforts IPOs. Excludes IPOs less than $25 million in gross proceeds.
(1) Crossover-Financing rounds defined as pre-IPO financings completed that included multiple crossover and/or large mutual funds in the investor syndicate.

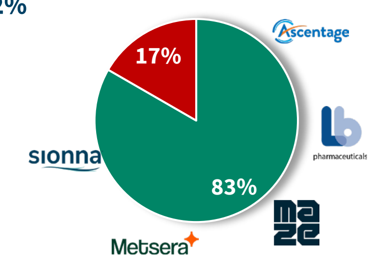
Recent Biopharma IPOs Have Recovered

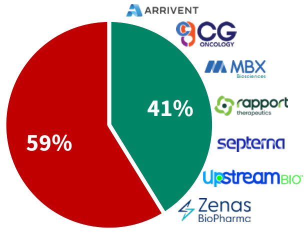
- Most of the recent IPO classes have outperformed the XBI since April lows, setting the stage for a more favorable IPO window
- The class of 2025 IPOs rebounded back to new highs, jumping +110.0% in only 5 months, with a median offer/current of 62.7%
- String of positive data readouts from recent IPOs and Metsera's $8B takeout just 235 days post-IPO have driven performance



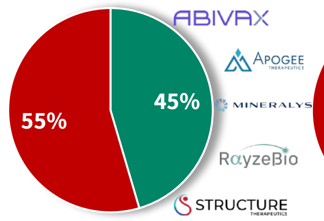
IPO Class Offer to Current Return

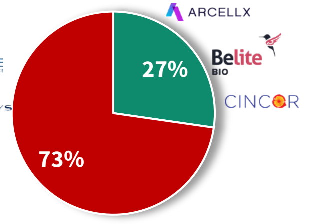
2025YTD IPO Class	2024 IPO Class
Mean: +71.8% Median: +62.7%	Mean: (24.1%) Median: (26.6%)





2023 IPO Class	2022 IPO Class
Mean: +71.8% Median: (39.6%)	Mean: +100.8% Median: (61.5%)





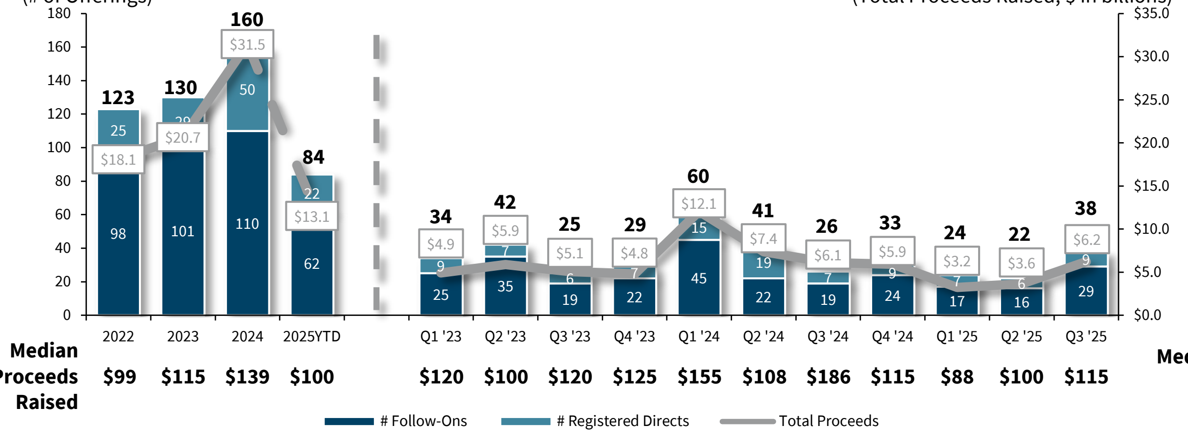
■ Trading Above Offer Price ■ Trading Below Offer Price

Source: Dealogic, FactSet, and SEC filings as of September 30, 2025.
Note: Includes U.S. IPOs only. Excludes IPOs with less than $25 million in gross proceeds and includes performance of since acquired companies at their takeout price.

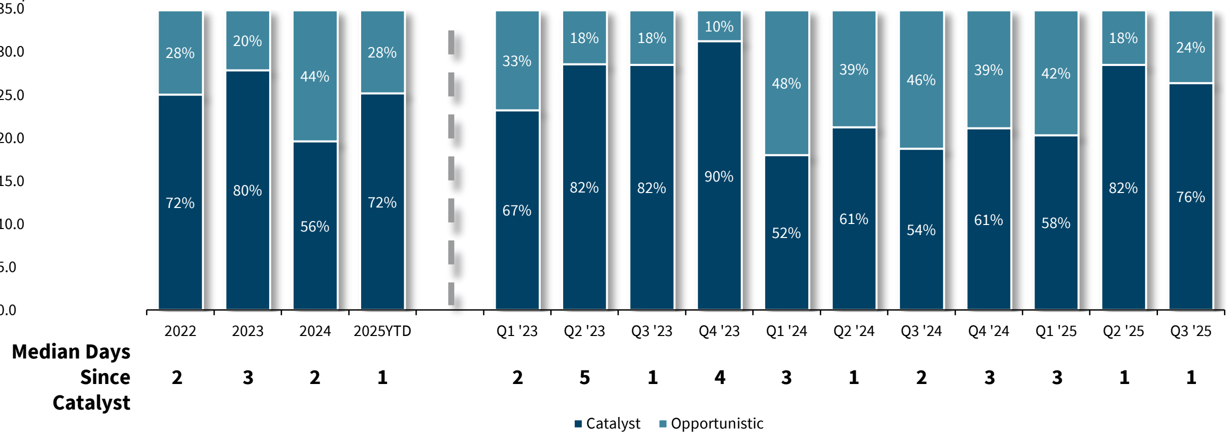
Biopharma Follow-on & Registered Direct Trends

Secondary volume in Q3 2025 improved from prior quarters but remains subdued YTD. Investors remain selective as the majority of offerings in Q3 2025 were surrounding key catalysts

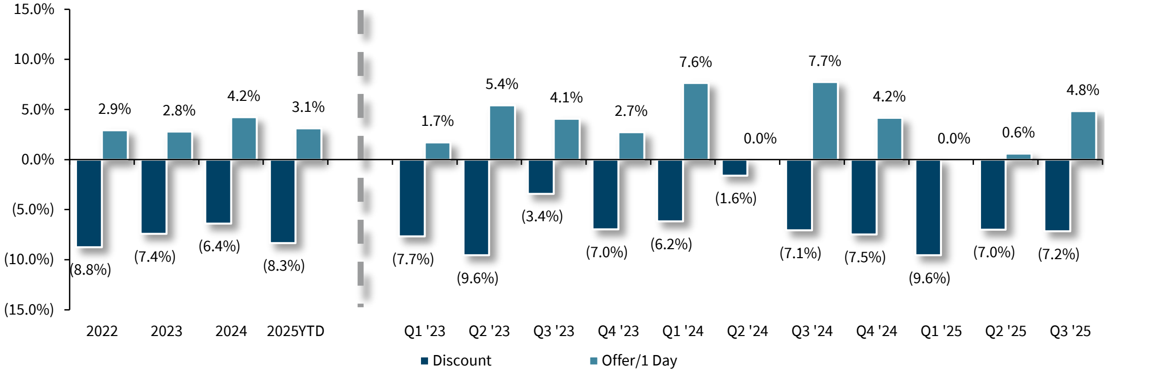
Deal Volume and Proceeds



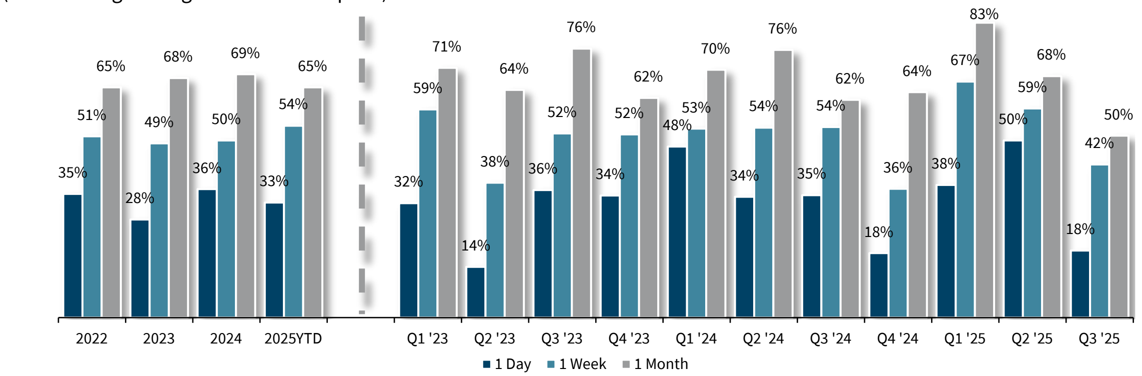
Catalysts Continue to Drive the Secondary Financing Market



Discounts Remain Consistent as Aftermarket Performance Improves[1]



Less Offerings Breaking Issue Price on Day-1

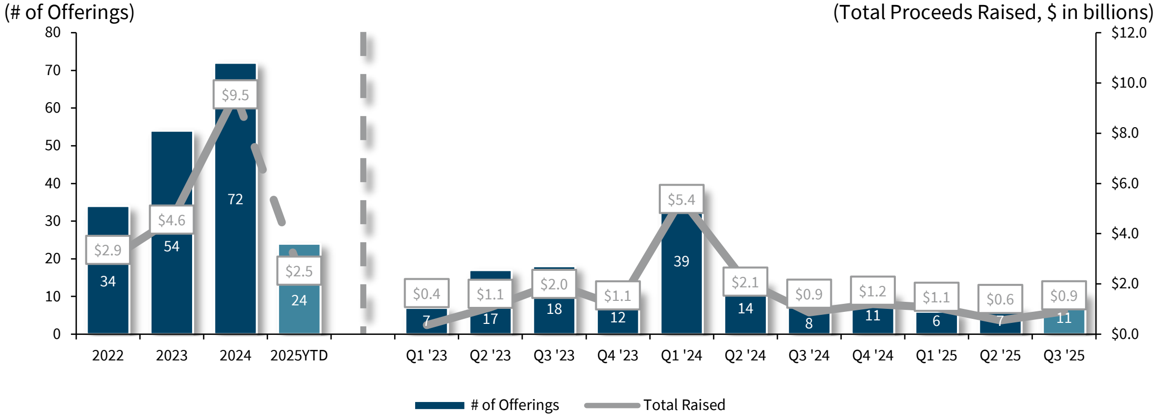


Source: Dealogic as of September 30, 2025.
Note: Includes fully marketed and confidentially marketed follow-on offerings and registered directs. Excludes offerings with gross proceeds below $20 million. Median pricing and performance includes offerings with warrants.
(1) Represents file/offer for fully marketed follow-on offerings and premium/discount to last trade for confidentially marketed follow-on offerings and registered directs.

Biopharma PIPE Trends

PIPE activity remained limited in Q3 2025, however, offerings that did price experienced strong aftermarket performance on the first day post announcement

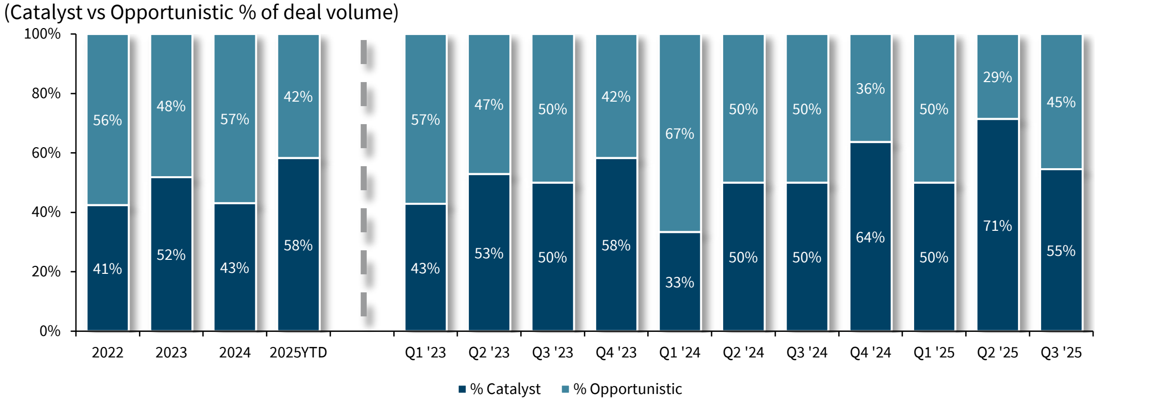
Deal Volume and Proceeds



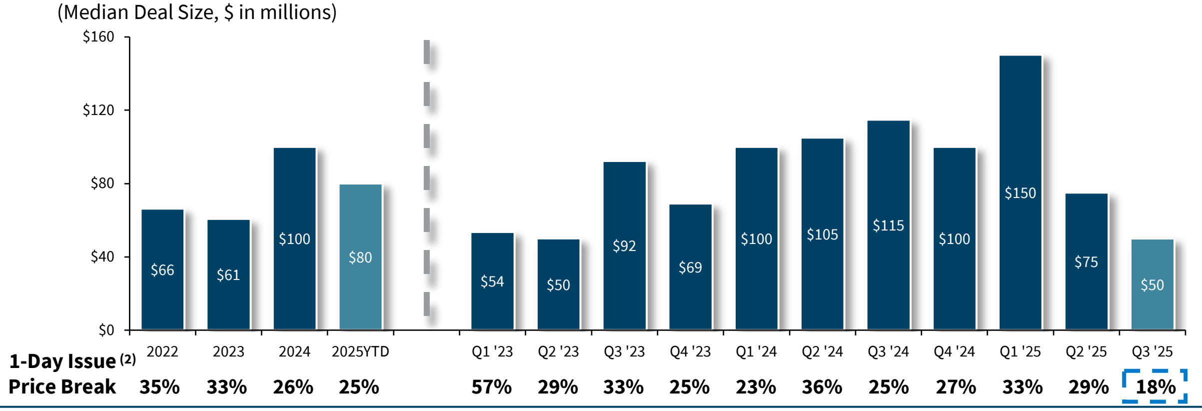
Market Has Supported Early-Stage PIPE Offerings Regardless of Size

Pricing Date	Company	Deal Value	1-Day Return	Stage of Development	Catalyst/ Opportunistic	Days Since Catalyst	Announced Concurrently
9/17/25	ORUKA THERAPEUTICS	$180	+8.1%	Phase IIa	Catalyst	0	✓
9/10/25	maze	$150	+52.6%	Phase II	Catalyst	0	✓
9/10/25	CAMP4	$50 [1]	+82.4%	Phase I	Opportunistic	NA	×
7/25/25	Lyell	$50	(6.8%)	Phase I/II	Catalyst	25	×
8/5/25	SHATTUCK LABS	$46 [1]	+13.8%	Preclinical	Opportunistic	NA	×
7/1/25	atai LIFE SCIENCES	$40	+23.7%	Phase II	Catalyst	0	✓
7/21/25	DiaMedica THERAPEUTICS	$30	+29.7%	Phase II	Catalyst	2	×
8/21/25	Immuneering	$25	+17.2%	Phase IIa	Opportunistic	NA	×

Majority Catalyst PIPEs in Q3; In Line With 2025YTD



While Deal Size Has Decreased, Offerings Performing Better



Source: Dealogic as of September 30, 2025.
Note: Excludes offerings with gross proceeds below $20 million.
(1) Includes only initial upfront proceeds, excludes additional tranches of milestone-based proceeds.
(2) % of offerings where intra-day low fell more than 5.0% below offer price.

Venture Debt in Biopharma

Despite broader market volatility and uncertainty throughout the year, venture debt[1] continues to deliver for borrowers seeking minimally dilutive capital

Market Overview

- As borrowers navigate the highs and lows of 2025, venture debt continues to stand out by offering certainty of close and minimal dilution, among other benefits
- An uptick in the number of venture debt lenders has led to a more competitive market with improved structures and terms for high-quality, performing companies
- Average deal size continues to rise for these performing companies as lenders aggressively target larger opportunities
- Direct lenders have enabled borrowers to raise capital with thinner equity cushions as they are not restricted by the same regulatory pressures as commercial banks
- However, companies facing growth headwinds are not getting the same looks as their high-performing counterparts as lenders patiently pick their spots to deploy capital
- With a significant amount of dry powder available, venture debt will continue to be an attractive source of capital in 2025 as enthusiasm for the product remains high for borrowers and lenders alike

2025YTD Venture Debt[1] Financings for Public Biopharma Companies

($ in millions)

					LTM at Close[3]					
Date	Company	Available at Close	Total Facility[2]	Interest Rate	Revenue	EBITDA	Market Cap at Close	Debt / Mkt Cap	Facility / Mkt Cap	Phase of Development
9/29/25	ARS Pharma	$100	$150	9.48%	$112	($59)	$961	10.4%	15.6%	Marketed
9/03/25	Precigen	$100	$125	10.48%	$4	($92)	$1,415	7.1%	8.8%	Marketed
8/12/25	Armata Pharmaceuticals	$15	$15	14.00%	$7	($34)	$89	16.8%	16.8%	Phase III Ready
7/22/25	Madrigal Pharmaceuticals	$350	$500	8.73%	$516	($308)	$6,959	5.0%	7.2%	Marketed
6/30/25	Dyne Therapeutics	$100	$275	9.95%	$0	($439)	$1,082	9.2%	25.4%	Reg. Phase I/II
6/11/25	Cogent Biosciences	$50	$400	8.90%	$0	($286)	$827	6.0%	48.4%	Phase III
6/3/25	Vera Therapeutics	$75	$300	9.08%	$0	($193)	$1,971	3.8%	15.2%	Phase III
5/13/25	Axsome	$370	$370	8.88%	$432	($231)	$5,218	7.1%	7.1%	Marketed
5/13/25	Altimmune	$15	$100	9.95%	$0	($98)	$467	3.2%	21.4%	Phase III Ready
5/09/25	Neumora	$40	$125	10.45%	$0	($274)	$107	37.3%	116.6%	Phase III
4/21/25	Invivyd	$0	$30	13.00%	$37	($146)	$67	0.0%	44.6%	Marketed
3/31/25	MoonLake	$75	$500	8.70%	$0	($169)	$2,470	3.0%	20.2%	Phase III
3/26/25	Savara	$30	$200	7.45%	$0	($102)	$566	5.3%	35.4%	BLA Filed
3/12/25	Armata Pharmaceuticals	$10	$10	14.00%	$5	($41)	$68	14.6%	14.6%	Phase III Ready
3/5/25	CalciMedica	$10	$33	12.75%	$0	($24)	$29	34.8%	113.2%	Phase II
3/4/25	Nuvation Bio	$0	$100	10.13%	$8	($167)	$613	0.0%	16.3%	NDA Filed
1/13/25	Inhibrx	$100	$150	9.95%	$0	($261)	$197	50.6%	76.0%	Phase II/III
Mean		**$85**	**$199**	**10.35%**	**$66**	**($172)**	**$1,359**	**12.6%**	**35.5%**	
Median		**$50**	**$150**	**9.95%**	**$0**	**($167)**	**$613**	**7.1%**	**20.2%**	
Minimum		**$0**	**$10**	**7.45%**	**$0**	**($439)**	**$29**	**0.0%**	**7.1%**	
Maximum		**$370**	**$500**	**14.00%**	**$516**	**($24)**	**$6,959**	**50.6%**	**116.6%**	

Source: CapIQ, PitchBook Data, Inc., and SEC filings as of September 30, 2025.
(1) "Venture debt" defined here as debt to borrowers who do not yet have positive cash flow.
(2) Represents total commitment and includes undrawn revolvers and additional tranches of debt / delayed draw facilities.
(3) LTM financials at time of close are as calculated by CapIQ.

Strategic Alternatives Outcomes

- Only one reverse merger in Q3 2025 as steady pace of take private transactions continues to return capital to shareholders
- Distressed companies have also turned to cryptocurrency treasury strategies as alternative means of value creation

2025YTD Strategic Alternatives Outcomes

Indicates biopharma companies that have announced a cryptocurrency treasury strategy

Outcome Type	Q1 2025	Q2 2025	Q3 2025	Total
Reverse Merger Traditional reverse mergers with private companies	Salarius Pharmaceuticals / Decoy Therapeutics	Carisma Therapeutics / OrthoCellix	Barinthus Biotherapeutics / Clywedog Therapeutics	3 Deals
Other Strategic Outcomes Includes program or full company buyouts, strategic mergers, cryptocurrency treasury strategy announcements, and/or in-licensings	Acelyrin / alumis	eyenovic (crypto treasury strategy) Vor / RemeGen	180 Life Sciences, Artelo Biosciences, equillium, Liminatus Pharma, LIXTE, MEI Pharma, portage, SiloPharma, Sonnet BioTherapeutics, Windtree Therapeutics (crypto treasury strategies) Adaptimmune / US WorldMeds	3 Deals / 11 Crypto Strategies
Financially-Driven Take Private Acquisitions Cash acquisition of companies for existing capital on hand and/or royalty rights following strategic review		Allakos, Elevation Oncology, Kronos Bio / Concentra Turnstone Biologics / XOMA	Cargo Therapeutics, igm biosciences, iTeos Therapeutics / Concentra Lava Therapeutics, Mural Oncology, HilleVax / XOMA ESSA / Xeno Therapeutics	11 Deals
Return of Capital Excess cash return to shareholders through dividend, often including concurrent liquidation		Keros Therapeutics(1) Third Harmonic Bio		2 Co.'s
Chapter 11 / Closure Voluntary delisting/ liquidation/bankruptcy These companies did not have excess cash to distribute to shareholders at closure	Omega Therapeutics Syros viracta	Affimed Vincerx Pharma		5 Co.'s
# of Outcomes	5	11	19	35

Seven Acquisitions Announced in Q3 for Cash and/or Royalty Rights

Company	Outcome Date	Acquisition Rationale	Net Cash ($M)(1)	Activist 13D Filing
Mural Oncology	08/20/25	Cash	$72	✗
HilleVax	08/04/25	Cash	$136	✗
Lava Therapeutics	08/04/25	Royalty Rights	$56	✗
iTeos Therapeutics	07/21/25	Cash	$510	✓
ESSA	07/14/25	Cash	$110	✓
Cargo Therapeutics	07/08/25	Cash	$252	✓
igm biosciences	07/01/25	Cash	$104	✗
			Total: ~$1.2B	Yes: 43%

Source: SEC Filings, Company Press Releases, and William Blair analysis as of September 30, 2025.
(1) Includes lease liabilities in total debt.
(2) Keros plans to return $375M in capital to existing shareholders and continue operations and development of KER-065.

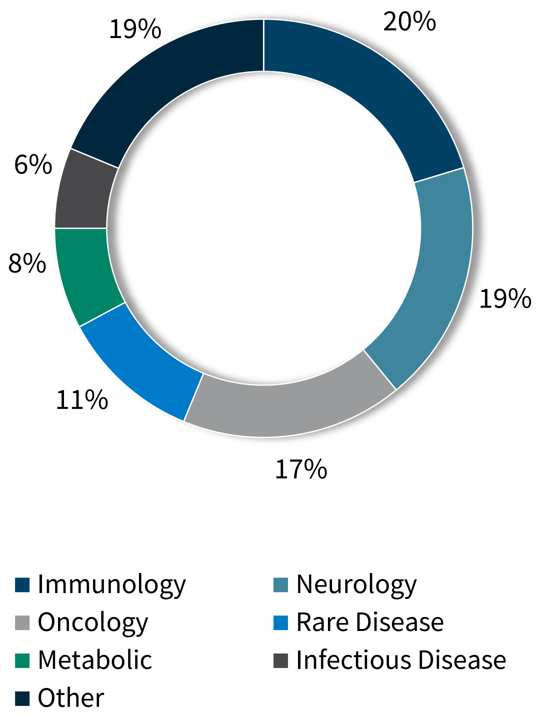
Q3 2025 SMID-cap Clinical Catalysts Analysis

- Companies and investors were rewarded for "positive" clinical data, with average 1-day stock reaction of over +40%, the highest since Q3 2023
- 8 of the top 10 movers raised catalyst-driven equity offerings concurrent with or following data announcements
- 4 of the top 10 movers were first clinical readouts for recent IPOs (ABVX, RAPP, MBX, MAZE), providing wins for the asset class

Key Takeaways

- William Blair analyzed 65 key clinical data readouts in Q3 2025 for U.S.-listed SMID-cap biopharma companies
- Average stock price performance for "positive" clinical data (N=48):
  - 1-day performance: **+42.7%**
  - 1-week performance: **+42.6%**
- Average stock price performance for "negative" clinical data (N=17):
  - 1-day performance: **(35.8%)**
  - 1-week performance: **(29.5%)**
- ~$5.9B in cumulative 1-day market cap **gained** across all SMID-cap clinical catalysts driven by positive pivotal/Phase III data readouts from United, ABIVAX, Ionis, UniQure, and Cytokinetics
  - Summit and Moonlake were the biggest negative market movers, losing a combined ~$8.4B in 1-day market cap

Breakdown by Therapeutic Area



Top 10 Positive/Negative Movers

(1-Day Share Price Change)

Top Performers		Catalyst Type	Worst Performers		Catalyst Type
ABVX	532%	Phase III Data	ENLV	(31%)	Phase I/II Data
PROK	515%	Phase II Data	LRMR	(34%)	Interim Phase II OLE Data
QURE	248%	Pivotal Phase I/II Data	IOBT	(42%)	Phase III Data
CELC	167%	Phase III Data	VKTX	(42%)	Phase II Data
PEPG	121%	Interim Phase I Data	MREO [1]	(43%)	Interim Phase III Data
RAPP	119%	Phase IIa Data	JSPR	(55%)	Phase Ib/IIa Data
MBX	100%	Phase II Data	VYNE	(72%)	Phase IIb Data
ENTA	92%	Phase IIb Data	ATYR	(83%)	Phase III Data
MAZE	55%	Phase I Data	KALA	(89%)	Phase IIb Data
FDMT	43%	Phase IIa Long-Term Data	MLTX	(90%)	Phase III Data

Executed Equity Offering Concurrent with or Post-Data

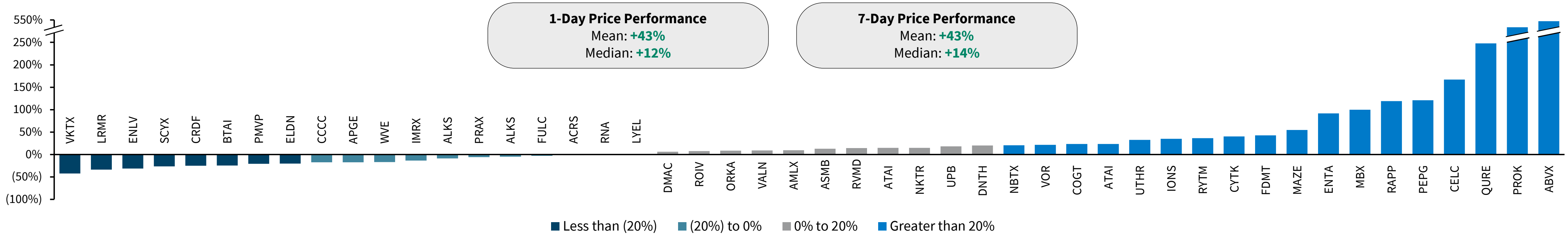
Source: FactSet, Company press releases, SEC Filings and William Blair analysis as of September 30, 2025.
Note: Includes biopharma companies listed on major U.S. exchanges with market capitalization >$25M and <$30 billion at the time of catalyst. Positive/negative based on Company press releases.
(1) MREO and RARE developing setrusumab (UX143) in collaboration.

Q3 2025 Positive/Negative Clinical Catalyst Performance Detail

38% of positive clinical catalysts had a >20% one-day stock price movement, while 53% of negative clinical catalysts experienced a one-day price decline greater than 20%

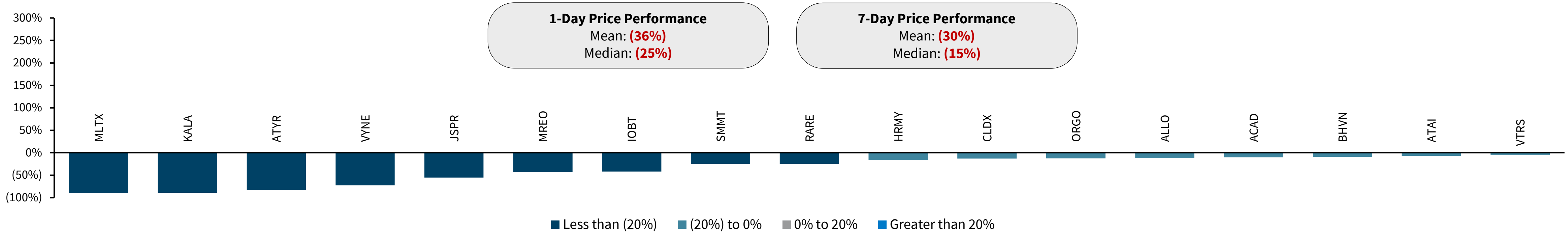
Performance Following a Positive Clinical Catalyst

(1-Day Share Price Change, N = 48)



Performance Following a Negative Clinical Catalyst

(1-Day Share Price Change, N = 17)



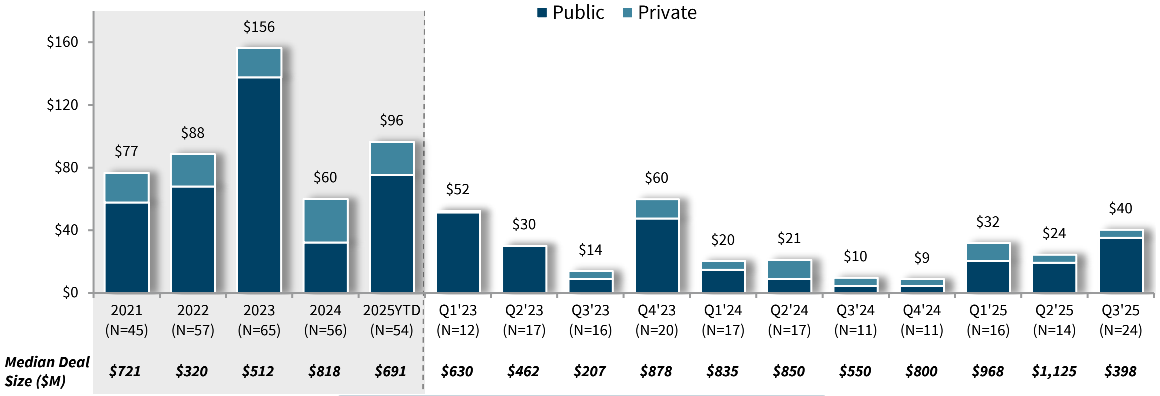
Source: FactSet, Company press releases, SEC Filings and William Blair analysis as of September 30, 2025.
Note: Includes biopharma companies listed on major U.S. exchanges with market capitalization >$25M and <$30 billion at the time of catalyst. Positive/negative based on Company press releases.

Q3 2025 Biopharma M&A Recap

- 24 deals announced for ~$40B in total deal value in Q3 2025, driven by steady pace of meaningful public company acquisitions
- Total deal value in 2025 has already exceeded 2024's level, which was the lowest in the past decade

Total Deal Value & Volume

($ in billions)



Key Takeaways

- Median deal terms for Q3 2025 M&A activity:
  - **Total Deal Value:** $398M in Q3 2025 (vs. $1,125M in Q2 2025)
  - **Upfront (Cash + Equity):** $327M in Q3 2025 (vs. $800M in Q2 2025)
  - **Milestones:** $204M in Q3 2025 (vs. $350M in Q2 2025)
- Public company M&A continued to increase this quarter (N=17 in Q3 vs. N=11 in Q2), led by six large public company M&A deals (>$1 billion in total deal value, all-cash transactions) totaling ~$33B in total deal value
  - Merck's $10B acquisition of Verona Pharma represents the largest deal of the quarter and the second largest in 2025YTD
- 7 take-private deals of companies for cash/royalties this quarter have driven down median deal size; excluding these transactions median deal size increases to $951 million
- Strategic acquisitions this quarter, excluding take-privates for cash, saw a wide range of TA interest, with the 3 most common TAs, oncology (N=5), infectious disease (N=3), and neurology (N=3)
- Public strategic takeouts continued to focus on de-risked assets, with 70% of deals (7 of 10) involving Phase III or later products
- AbbVie's $1.2B acquisition of Gilgamesh's lead asset, GM-2505, marks a notable milestone for the psychedelic field
- CVRs have become a prevalent feature in large public company M&A, with about half of deals in 2025YTD including CVRs

Q3 2025 M&A Activity Detail(1)

($ in millions)

Public Company Transactions

Date	Target	Acquiror	Total Deal Value	Total Upfront	Total Earnouts	Premium to Last Unaffected Date	Phase	Therapeutic Area	Modality
09/29/25	Merus	Genmab	$8,000	$8,000	-	41%	Phase III	Oncology	Bispecific Antibody
09/22/25	Metsera	Pfizer	$7,300	$4,900	$2,400	43%	Phase IIb	Metabolic	Peptide
09/18/25	89bio	Roche	$3,500	$2,400	$1,100	79%	Phase III	Hepatology, Metabolic	Protein
09/09/25	Tourmaline	Novartis	$1,400	$1,400	-	59%	Phase II	Cardiovascular	Antibody
08/25/25	scPharmaceuticals	mannkind	$360	$303	$57	10%	Marketed	Cardiovascular, Nephrology	Small Molecule
08/05/25	Y-mAbs	SERB Pharmaceuticals	$412	$412	-	105%	Marketed	Oncology	Antibody
07/29/25	durect	Bausch Health	$413	$63	$350	217%	Phase IIb	Hepatology	Small Molecule
07/28/25	Adaptimmune (TECELRA & CT Portfolio)	US WorldMeds	$85	$55	$30	NA	Marketed	Oncology	*ex vivo* T-Cell Therapy
07/28/25	Bavarian Nordic	Innospera Pharma	$2,951	$2,951	-	20%	Marketed	Infectious Disease	Vaccine
07/09/25	Verona Pharma	Merck	$10,000	$10,000	-	23%	Marketed	Pulmonology	Small Molecule

Private Company Transactions

Date	Target	Acquiror	Total Deal Value	Total Upfront	Total Earnouts	Phase	Therapeutic Area	Modality
09/18/25	Alcyone Therapeutics	Biogen	$85	$85	ND	Phase I/II(2)	Neurology	Gene Therapy
09/08/25	Kaerus Bioscience (KER-0193)	Servier	$450	ND	ND	Phase I	Neurology, Rare Disease	Small Molecule
08/25/25	Gilgamesh (GM-2505)	abbvie	$1,200	ND	ND	Phase II	Neurology	Small Molecule
08/21/25	interius	Kite	$350	$350	-	Phase I	Oncology	*in vivo* CAR-T
08/07/25	melinta therapeutics	CorMedix	$325	$300	$25	Marketed	Infectious Disease	Small Molecule
07/22/25	vicebio	sanofi	$1,600	$1,150	$450	Phase I	Infectious Disease	Vaccine
07/15/25	礼新医药 LaNova Medicines	中国生物制药有限公司 Sino Biopharmaceutical Limited	$951	$951	-	Phase III	Oncology	ADC

Source: PitchBook Data, Inc., Company press releases and websites as of September 30, 2025.
Note: M&A activity includes biopharma deals with disclosed total deal value of $20M+. Premiums based on upfront offer price, excluding CVRs and milestones, to last close before deal announcement. NA = Not Applicable. ND = Not Disclosed.
(1) Excludes take-privates of public companies for cash and/or royalty rights by Concentra and XOMA/XOMA-related entities.
(2) Acquisition of Alcyone Therapeutics includes the ThecaFlex DRx drug delivery device.

Summary of Investor Capital Returned from Q3 2025 Public Biopharma Acquisitions

Public biopharma acquisitions announced in Q3 2025 freed up an estimated $22 billion in institutional investor capital, largely driven by Merck’s acquisition of Verona Pharma and Genmab’s acquisition of Merus

($ in millions)

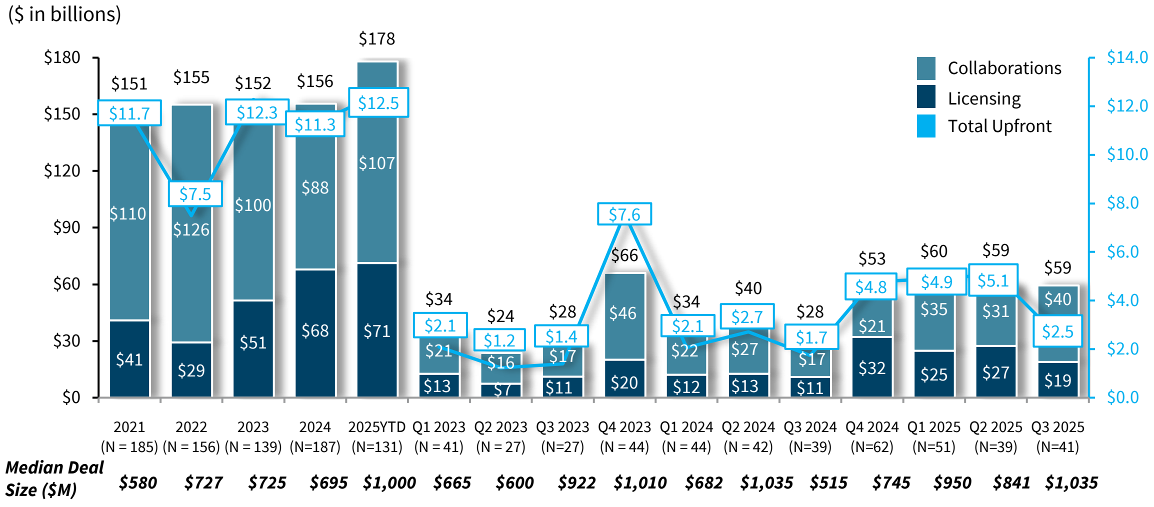
#	Institution	Total Estimated Capital Returned to Fund(1)	89bio	Merus	Metsera	TOURMALINE	Verona Pharma
1	Janus Henderson Investors US LLC	$1,306.9	✓	✓	✓		✓
2	Fidelity Management & Research Co. LLC	$1,183.5	✓	✓	✓	✓	✓
3	RTW Investments LP	$754.9	✓	✓		✓	✓
4	Wellington Management Co. LLP	$672.6	✓	✓	✓	✓	✓
5	Perceptive Advisors LLC	$658.0		✓			✓
6	RA Capital Management LP	$625.2	✓		✓	✓	✓
7	Avoro Capital Advisor LLC	$567.1	✓	✓		✓	
8	Darwin Global Management Ltd.	$480.3		✓		✓	✓
9	T. Rowe Price Associates, Inc. (IM)	$474.8	✓	✓	✓		✓
10	Paradigm BioCapital Advisors LP	$415.3		✓	✓		✓
11	Holocene Advisors, LP	$393.8	✓	✓			✓
12	BlackRock Fund Advisors	$392.2	✓	✓	✓	✓	✓
13	Frazier Life Sciences Management LP	$362.1	✓	✓			✓
14	Commodore Capital LP	$341.9	✓	✓			
15	Deerfield Management Co. LP	$328.3		✓	✓		
16	Westfield Capital Management Co. LP	$325.0	✓	✓			✓
17	Goldman Sachs & Co. LLC	$320.6	✓	✓	✓	✓	✓
18	Eventide Asset Management LLC	$309.4	✓		✓	✓	✓
19	Polar Capital LLP	$300.6	✓	✓			✓
20	Suvretta Capital Management LLC	$291.3	✓			✓	
21	Pictet Asset Management SA	$276.4	✓	✓		✓	✓
22	Deep Track Capital LP	$273.4	✓	✓	✓	✓	✓
23	Federated Global Investment Management Corp.	$270.9	✓	✓			✓
24	NEA Management Co. LLC	$242.2					✓
25	Citadel Advisors LLC	$234.6	✓	✓	✓	✓	✓
26	Woodline Partners LP	$230.0	✓	✓	✓	✓	✓
27	Summit Partners Public Asset Management LLC	$229.4					✓
28	SoftBank Capital Partners LLC	$228.9			✓		
29	Caligan Partners LP	$217.5		✓			✓
30	Adage Capital Management LP	$215.1	✓	✓		✓	✓

Source: FactSet and William Blair Analysis as of September 30, 2025.
Note: The analysis does not include insiders, index funds, private brokerages, retail, strategic investors, and non-filers. $ value position calculated based on Q2 2025 publicly disclosed institutional ownership of target company multiplied by announced per share acquisition price, excluding contingencies. Includes deals >$1 billion in upfront cash.
(1) Total estimated capital in millions returned to fund based on the cumulative $ value position of all target companies for shareholders.

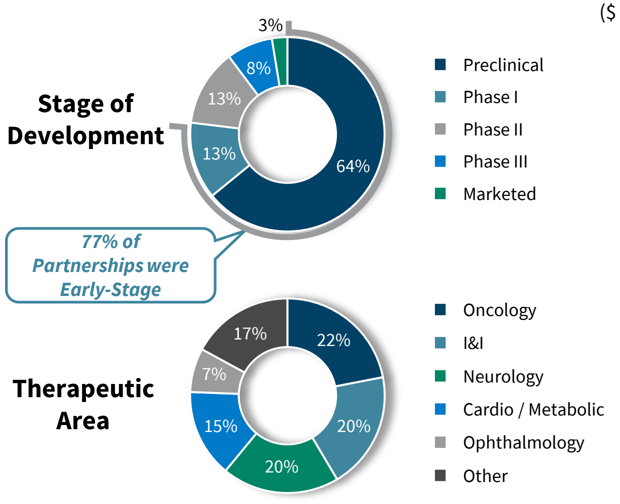
Q3 2025 Biopharma Partnership Trends

- While deal activity remained in-line with Q2, overall 2025YTD partnering upfronts and TDV have surpassed 2021-2024 levels
- Novartis led the way for large pharma licensees in Q3, showing a keen interest in early-stage I&I and neurology collaborations

Total Deal Value and Volume



Breakdown of Deals in Q3 2025



Most Active Partners in Q3 2025

($ in millions)

Partner	Deals	Median TDV	Median Upfront
Novartis	5	$2,200	$120
Lilly	3	$1,078	ND
Boehringer Ingelheim	2	$620	ND
Genentech	2	$495	$13
Vertex	1	$2,045	$45
Novo Nordisk	1	$550	ND
Merck	1	$2,000	ND
Bayer	1	$1,300	ND
GSK	1	$12,500	$500
AbbVie	1	$1,925	$700
AstraZeneca	1	~$825	ND

Key Takeaways

Licensing (N=17)

- Median deal terms for licensing agreements in Q3 2025:
  - **Total Deal Value:** $1,057M in Q3 2025 (vs. $731M in Q2 2025)
  - **Upfront (Cash+Equity):** $34M in Q3 2025 (vs. $80M in Q2 2025)
  - **Milestones:** $915M in Q3 2025 (vs. $1,050M in Q2 2025)
- Upfront payments amounted to just 3.2% of TDV on a median basis, down over 50% compared to Q2
- Licensings for antibody programs in Q3 2025 comprised just 14% of deals, compared to nearly 50% in Q2 2025
- Nearly even split by stage of development, with 53% focused on early-stage assets and 47% on later-stage

Collaborations (N=24)

- Median deal terms for collaborations in Q3 2025:
  - **Total Deal Value:** $1,000M in Q3 2025 (vs. $942M in Q2 2025)
  - **Upfront (Cash+Equity):** $45M in Q3 2025 (vs. $71M in Q2 2025)
  - **Milestones:** $1,000M in Q3 2025 (vs. $1,000M in Q2 2025)
- Four early-stage, multi-targets deals contributed ~60% of total partnering TDV (Hengrui/GSK, XTalPi/DoveTree, Monte Rosa/Novartis, and Argo/Novartis); 3 of 4 represent east-west collaboration agreements
- Early-stage collaborations garnered a median upfront of $45M for licensors

Top 5 Partnerships by Total Upfront in Q3 2025

($ in millions)

Date	Licensor	Licensee	Total Deal Value	Total Upfront	Milestones	Phase	Therapeutic Area	Modality	Target(s)
7/10/2025	IGI Ichnos Glenmark Innovation	AbbVie	$1,925	$700	$1,225	Phase I	Oncology	Trispecific Antibody	CD38×BCMA×CD3
7/28/2025	Hengrui	GSK	$12,500	$500	$12,000	Phase I, Preclinical	Respiratory I&I, Oncology	Small Molecule, Various	PDE3/4, ND
9/2/2025	Arrowhead Pharmaceuticals	Novartis	$2,200	$200	$2,000	Preclinical	Neurology	siRNA	alpha-synuclein
9/3/2025	Argo Biopharma	Novartis	$5,200	$160	$5,040	Phase II	Cardiovascular	siRNA	ND
9/15/2025	Monte Rosa Therapeutics	Novartis	$5,700	$120	$5,580	Discovery	I&I	Small Molecule	ND

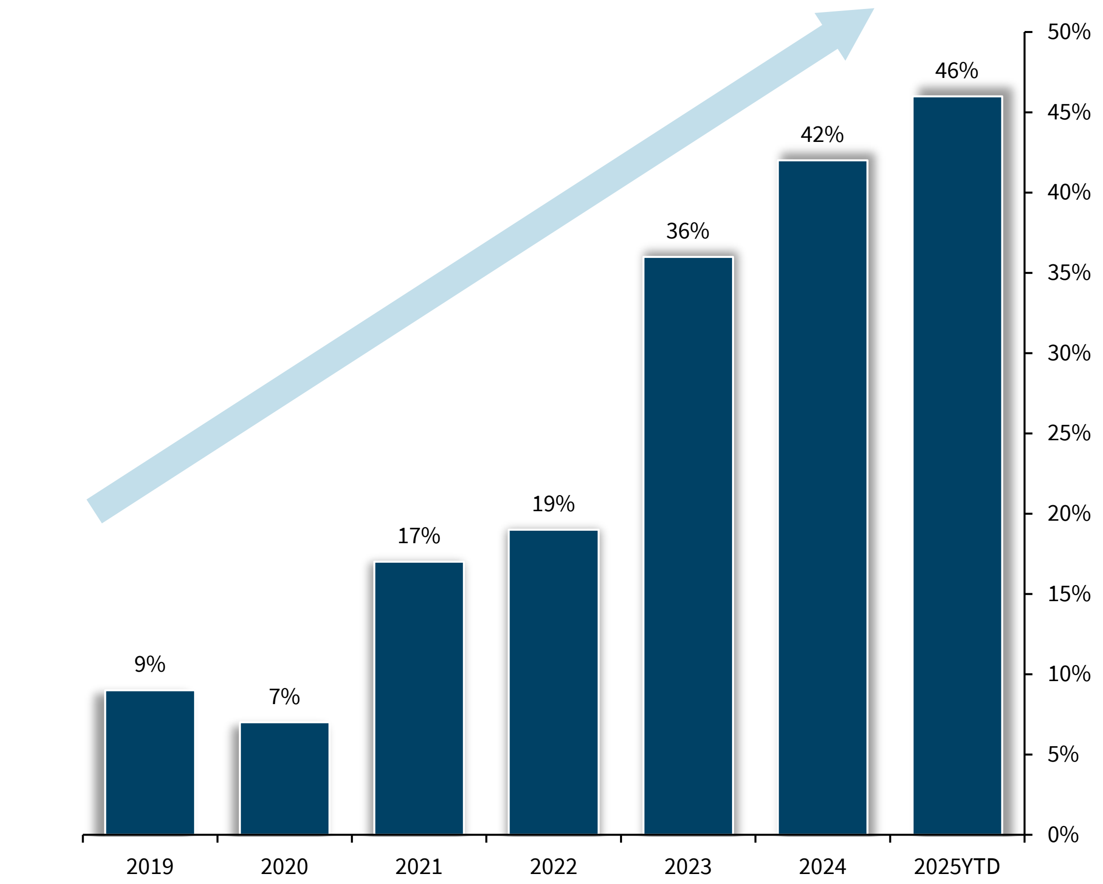
Source: Company press releases and SEC filings as of September 30, 2025.
Note: Excludes regional partnerships, partnerships with undisclosed deal terms, and partnerships with deal terms less than $20M. Early-stage partnerships defined as Phase I or earlier. Upfront includes near-term milestones.
TDV = Total Deal Value.

Asia's Growing Role as an Important Innovation Engine for the West

Assets originated in Asia drove over $6 billion(1) in upfront payments since 2024 as large pharma companies increasingly look there for assets, with the majority of activity focused on fast follower / best-in-class programs for validated targets

Large Pharma is Sourcing Half of External Molecules from Asia(2)

(% of large pharma in-licensing activity)



Q3 2025 Activity with Asian Licensors(3)

Select Large Pharma Partnerships

9/3/2025 – Argo Biopharma / NOVARTIS
- $5,200M
- *($160M Upfront)*
- siRNA
- Phase II
- Target ND

7/29/2025 – LTZ Therapeutics / Lilly
- Total Deal Value ND
- *(Double-Digit $M Upfront)*
- Antibody Discovery
- Target ND

7/28/2025 – HENGRUI / GSK
- $12,500M
- *($500M Upfront)*
- Small Molecule
- Phase I
- Target: PDE3/4

SMID-cap/Other Asset-Focused Licensings

9/22/2025 – Sovargen / Angelini Pharma
- $550M+
- *(Upfront ND)*
- Oligonucleotide
- Preclinical
- Target: mTOR

9/3/2025 – 科弈 Novatim / RADIANCE biopharma
- $1,165M
- *($15M Upfront)*
- ADC
- Phase I
- Target: c-Met x EGFR

8/26/2025 – FOSUN PHARMA 复星医药 / SITALA
- $675M
- *($25M Upfront)*
- Small Molecule
- Phase II
- Target ND

8/11/2025 – FOSUN PHARMA 复星医药 / Expedition
- $645M
- *($17M Upfront)*
- Small Molecule
- Phase II
- Target: DPP1

7/30/2025 – CSPC / Madrigal Pharmaceuticals
- $2,120M
- *($120M Upfront)*
- Small Molecule
- Preclinical
- Target: GLP-1

7/17/2025 – Kowa / nicox visible science
- $232M
- *($9M Upfront)*
- Small Molecule
- Phase III
- Target: PGF2 alpha

New Company Formations

9/17/2025 – Mabwell, Aditum Bio → Kalexo Bio
- $1,012M
- *($12M Upfront)*
- siRNA
- Preclinical
- Target ND

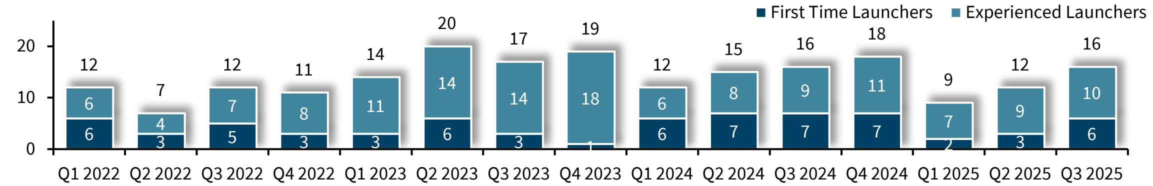
9/6/2025 – HENGRUI / Braveheart Bio
- $1,079M
- *($65M Upfront)*
- Small Molecule
- Phase III
- Target: Cardiac Myosin

Source: Company press releases and SEC filings as of September 30, 2025.
(1) Includes upfront payments from asset-focused partnerships and asset acquisitions involving a large pharma licensee and Asia-headquartered licensor occurring since 2024. Upfronts include near-term milestones.
(2) Includes asset-focused partnerships and asset acquisitions with an upfront size of at least $50 million, involving large pharma licensees and Asia-headquartered licensors.
(3) Licensing transactions ordered chronologically by date of agreement announcement. ND = Not Disclosed.

FDA Approval and First-Time Launcher (FTL) Trends

- 16 new FDA approvals in Q3 2025 (6 FTLs and 10 experienced launchers)
- 75% of SMID-cap PDUFAs applications reviewed by CBER resulted in a CRL, compared to only 25% for CDER

FDA Approvals by Quarter

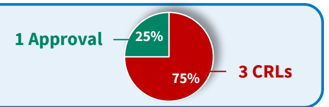


Q3 2025 SMID-cap PDUFA Outcomes

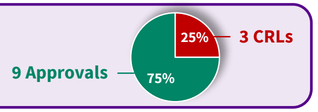
Approval CRL

Company	Product	Indication	Modality	Outcome	Outcome Date	Evaluating Body[1]
Dizal	Zegfrovy	Advanced non-small cell lung cancer	Small Molecule	Approved	7/2/2025	D
Kalvista	Ekterly	Hereditary angioedema	Small Molecule	Approved	7/3/2025	D
Capricor	Deramiocel	Duchenne muscular dystrophy	Cell Therapy	Complete Response Letter	7/11/2025	B
Ultragenyx	UX111	MPS type IIIA	Gene Therapy	Complete Response Letter	7/11/2025	B
Replimune	RP1	Advanced melanoma	Oncolytic Virus	Complete Response Letter	7/22/2025	B
LEO Pharma	Anzupgo	Chronic Hand Eczema	Small Molecule	Approved	7/23/2025	D
PTC	Sephience	Phenylketonuria	Small Molecule	Approved	7/28/2025	D
Lenz	Vizz	Presbyopia	Small Molecule	Approved	7/31/2025	D
Jazz	Modeyso	H3 K27M-mutant diffuse glioma	Small Molecule	Approved	8/6/2025	D
Insmed	Brinsupri	Non-cystic fibrosis bronchiectasis	Small Molecule	Approved	8/12/2025	D
Precigen	Papzimeos	Recurrent respiratory papillomatosis	Gene Therapy	Approved	8/15/2025	B
Tonix	Tonmya	Fibromyalgia	Small Molecule	Approved	8/15/2025	D
PTC	Vatiquinone	Friedreich's ataxia	Small Molecule	Complete Response Letter	8/19/2025	D
Ionis	Dawnzera	Hereditary angioedema	Oligonucleotide	Approved	8/21/2025	D
Outlook	ONS-5010	Wet AMD	Antibody	Complete Response Letter	8/28/2025	D
Apitegromab	Scholar Rock	Spinal muscular atrophy	Antibody	Complete Response Letter	9/23/2025	D
Paltusotine	Crinetics	Acromegaly	Small Molecule	Approved	9/25/2025	D

4 SMID-cap Outcomes by CBER



12 SMID-cap Outcomes by CDER



Select Upcoming 2025 SMID-cap PDUFA Dates

Company	Product	Indication	Modality	PDUFA Date
Biohaven	Troriluzole	Spinocerebellar ataxia	Small Molecule	Q4 2025
Glaukos	Epioxa	Keratoconus	Cell Therapy	10/20/2025
Arrowhead	Plozasiran	Familial chylomicronemia syndrome	RNAi	11/18/2025
Ascendis	Transcon CNP	Achondroplasia	Peptide	11/30/2025
Kura	Ziftomenib	Relapsed or refractory NPM1-mutant AML	Small Molecule	11/30/2025
Axogen	Avance Nerve Graft	Nerve damage	Allograft	12/5/2025
Milestone	Cardamyst	Paroxysmal supraventricular tachycardia	Small Molecule	12/13/2025
Innoviva	Zoliflodacin	Uncomplicated gonorrhea	Small Molecule	12/15/2025
Omeros	Narsoplimab	TA-TMA	Antibody	12/16/2025
Alderya	Reproxalap	Dry eye disease	Small Molecule	12/16/2025
Cytokinetics	Aficamten	oHCM	Small Molecule	12/26/2025
Corcept	Relacorilant	Cushing's syndrome	Small Molecule	12/30/2025
Vanda	Tradipitant	Motion sickness	Small Molecule	12/30/2025
NRx	NRX-101	Bipolar depression	Small Molecule	12/31/2025

Source: FDA.gov, Company press releases, SEC Filings, FactSet, and William Blair analysis as of September 30, 2025.
Note: Reflects approvals and PDUFAs of NCEs/NMEs that are submitted via BLA/NDA (excluding diagnostics, biosimilars, generics, source plasma and 505b2s without clinical trial data). PDUFAs do not include label extensions or supplemental applications.
(1) D = CDER Evaluation. B = CBER Evaluation.

Large Pharma Accelerates U.S. Manufacturing Investments to Mitigate Upcoming Tariffs

- On September 25, 2025, President Trump announced 100% tariffs on pharmaceuticals unless companies are actively building U.S. manufacturing, though the White House has since delayed implementation pending industry negotiations
- Large pharma has announced ~$368 billion of planned investments in U.S. manufacturing, with nearly half having already announced breaking ground, which should mitigate overall impact of tariffs on the sector

■ = Announced H1 2025
■ = Announced Q3 2025

Company	$ Committed to Increase U.S. Manufacturing Footprint ($B)	Time Horizon (Years)	Ground Broken Disclosed?	Additional Commentary
		Manufacturing-Related Guidance		
Johnson&Johnson	$55.0 + $2.0 = $57.0	4+	✓	"...[we are committed to] bringing U.S. [...] jobs back to the U.S. **as well as domestic manufacturing**..." (9/24/25)
AstraZeneca	$50.0	5	×	"...recently announced $50 billion investment plan in the U.S. [...] [is in line with our] objectives to **increase both our manufacturing and R&D footprints in the U.S.**..." (7/29/25)
Roche	$50.0	5	✓	"...it has always been our belief as a company that **you should manufacture your products close to the people who need to use them** [...] All of **our key medicines are already produced today in the U.S.**..." (9/22/25)
Bristol Myers Squibb	$40.0	5	×	"...we certainly **appreciate the administration's efforts to enhance U.S. manufacturing** [...] We are a **significantly U.S. based company today**. We have been investing in core infrastructure in the U.S. for many years..." (4/24/25)
GSK	$30.0	5	×	"...we are committing to invest at least **$30 billion in the U.S.** over the next 5 years, further bolstering the **already strong R&D and supply chain** we have in the country..." (9/17/25)
Takeda	$30.0	5	×	"...the country where we have the **biggest manufacturing presence [...] is by far the U.S. [...] we will continue to invest in this manufacturing network in the U.S.** and that's also why our exposure to tariffs is limited..." (7/30/25)
Lilly	$27.0	ND	×	"...**we did 2 [manufacturing] announcements this week, and it's becoming almost like a norm** [...] don't get too used to [having] a lot of new sites every week, but also great progress..." (9/25/25)
NOVARTIS	$23.0	5	×	"...with new manufacturing capacity, Novartis will be able to **produce 100% of its key medicines [...] in the U.S.**..." (4/10/25)
sanofi	$20.0	5	×	"...the company also plans to **expand its U.S. manufacturing capacity**, both through direct investments in Sanofi sites, as well as through **partnerships with other domestic manufacturers**..." (5/14/25)
GILEAD	$11.0	5	✓	"...[this investment] will support the building of three new, state-of-the-art facilities, upgrading three existing sites **to expand U.S. manufacturing** and R&D capabilities..." (5/7/25)
abbvie	$10.0	10	✓	"...longer term, **we will add more U.S. manufacturing capacity**, which is part of the planned $10 billion in capital investment that we announced during the first quarter..." (7/31/25)
MERCK	$9.0	4	✓	"...we are now very well positioned [...] as we started to **shift our manufacturing footprints** and have in place plans to really **do U.S. production for U.S. sales**..." (9/8/25)
REGENERON	$7.0	10	✓	"...Regeneron, already one of the largest manufacturers of biologics in the world, will nearly **double its U.S. large-scale manufacturing capacity**..." (4/22/25)
Biogen	$2.0	3+	✓	"...in the next few years, Biogen plans to continue **investing in multiple modalities and factories** across the company's two campuses in [North Carolina's Research Triangle Park]..." (7/21/25)
AMGEN	$0.9 + $0.7 = $1.6	2+	✓	"...expansion underscores Amgen's **commitment to U.S. biomanufacturing** and to strengthening the resilience of our global supply chain..." (9/26/25)
	Total: ~$368B Added in Q3: ~$85B	Median: 5 Years		

Source: Company filings and press releases as of September 30, 2025.

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