Where pharma is investing for the future of medicine

Biopharma deal making in 2025 and 2026

Clarivate

Contents

Introduction

27%

increase in deal values in 2025 compared with 2024.

The biopharma deal-making landscape in 2025-2026 marked a return to strategic boldness. After navigating the uncertainties of 2024, the sector delivered a resounding validation of innovation-led growth strategies: 2025 deal values reached a record $292.6bn, representing a 27% increase over the prior year and the highest annual total in BioWorld's records.

However, financing activity told a more cautious story, with total biopharma financings declining to $81.21bn in 2025, down from $102bn in 2024, before rebounding in Q1 2026 with IPOs more than doubling year-over-year and follow-on offerings tripling to $9.3bn.

The deal-making surge reflects not merely a return of capital but a fundamental shift in how large pharma companies are securing their competitive futures: through fewer, larger and more strategically concentrated partnerships that prioritize platform access, geographic diversification and therapeutic franchise building.

Several converging forces are driving this transformation. Patent cliffs continue to loom large, with blockbuster exclusivity losses threatening revenue streams across multiple therapeutic areas. Leading companies are pursuing partnerships that deliver multiple assets, platform technologies or entire therapeutic pipelines in single transactions, in addition to searching for the next blockbuster asset. The top ten deals of 2025 alone accounted for almost $75bn in potential value, with GSK's $12.5bn Hengrui Pharma collaboration, Takeda's $11.4bn Innovent Biologics partnership and BioNTech's $11.1bn alliance with Bristol Myers Squibb exemplifying this concentrated approach.

The year's deal-making also revealed clear therapeutic and geographic priorities. Oncology maintained its dominance, particularly in next-generation modalities including antibody-drug conjugates (ADCs), bispecific antibodies and radiopharmaceuticals. Immunology emerged as a major focus area, with companies pursuing oral alternatives to injectable biologics, novel protein degraders and precision immune modulators. Meanwhile, the metabolic disease landscape expanded beyond GLP-1 receptor agonists (RAs) to encompass complementary mechanisms addressing muscle preservation and once-monthly dosing innovations.

The geographic rebalancing of innovation sourcing has dominated recent industry news. Mainland China's share of global out-licensing deals have grown significantly over the last five years, driven by compelling economics and AI-integrated discovery platforms.

Major pharma companies are no longer simply accessing the Chinese market; they are systematically mining Mainland China's innovation ecosystem for first-in-class and best-in-class candidates, with deals announced in 2025 and 2026 such as Bristol Myers Squibb's $15.2bn Hengrui Pharma deal, AstraZeneca's $5.3bn CSPC Pharmaceutical collaboration and Eli Lilly and Co's $8.9bn Innovent Biologics partnership demonstrating this strategic pivot.

The M&A landscape, although recording lower total values than deal-making overall ($96.8bn in 2025, down 10% from 2024), continued the industry's preference to fill specific pipeline gaps. Novartis, Merck and Eli Lilly and Co emerged as the most acquisitive buyers over the past five years, each pursuing distinct strategies: Novartis building leadership positions in RNA therapeutics and protein degraders, Merck fortifying its post-Keytruda oncology portfolio while diversifying into pulmonary disease and rare disorders and Eli Lilly and Co leveraging GLP-1 RA windfall profits to establish next-generation franchises across oncology, immunology and in vivo gene therapies.

This momentum carried into 2026, with first-quarter deal values reaching $79.22bn, a 17% increase over Q1 2025 and the strongest opening quarter in recent years.

First-quarter deal values reached $79.22bn, a 17% increase over Q1 2025 and the strongest opening quarter in recent years.

However, deal volume continued its gradual decline to 312 transactions, down 9% year-over-year, underscoring the ongoing concentration toward fewer, higher-value strategic partnerships.

However, this resurgence unfolds against a backdrop of emerging uncertainties that could reshape the sector's trajectory. The pharmaceutical industry's accelerating pivot toward artificial intelligence (AI), reflected by Novo Nordisk's OpenAI partnership, Eli Lilly and Co's NVIDIA co-innovation lab and Merck's $1bn Google Cloud collaboration, raises fundamental questions about biotech's traditional role as an innovation intermediary. If AI platforms can directly generate promising targets and molecular candidates, the decades-old model of pharma relying on biotech startups for early-stage innovation may require reinvention.

Simultaneously, the global research ecosystem that feeds pharmaceutical innovation is experiencing significant disruption. Ongoing U.S. government funding instability, combined with immigration policy changes affecting scientific talent recruitment, has triggered a measurable 'brain drain' as researchers and institutions look abroad. These shifts could permanently alter where future therapeutic breakthroughs emerge and which nations lead the next generation of drug discovery.

The pharmaceutical industry is executing a more confident, globally diversified and strategically concentrated approach to external innovation — one that prioritizes platform access, favors established partnerships over transactional relationships and increasingly looks beyond traditional Western innovation hubs. Companies that can effectively navigate AI integration, geopolitical complexity and evolving talent landscapes while maintaining disciplined capital allocation will be best positioned to lead biopharma's next growth cycle.

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Our data sources

Cortellis Deals Intelligence
combines comprehensive pharma deal data with powerful visualizations to help you quickly assess comparable deal terms, benchmark pricing and identify potential partners, so that you can negotiate the best deal.

BioWorld
is an industry-leading suite of news services delivering actionable intelligence on the most innovative therapeutics and medical technologies in development.

Cortellis Competitive Intelligence
empowers strategy and business development teams to make critical portfolio decisions backed by comprehensive pipeline and pharma competitive intelligence.

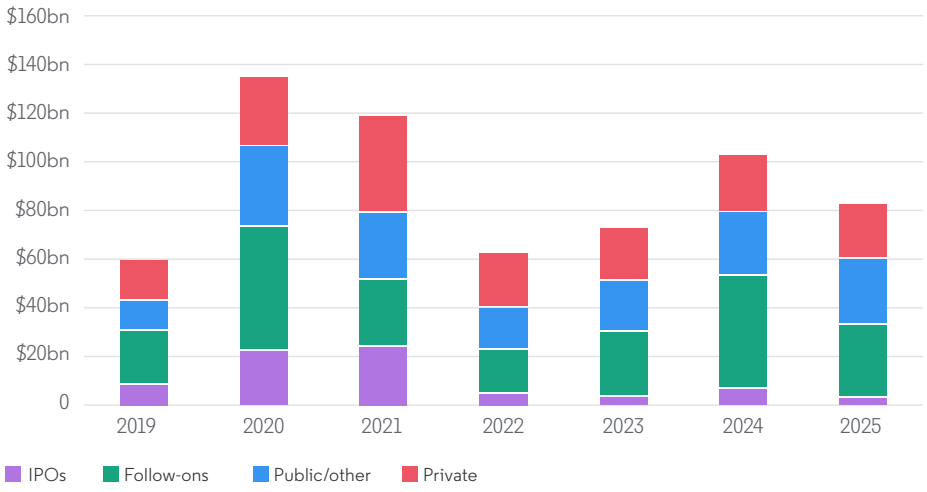
Data and insights current as of May 12, 2026.

Financing activity declined through 2025 before early 2026 recovery

Annual biopharma financing values declined to $81.21bn in 2025, down from $102bn in 2024 (Figure 1). IPO activity remained particularly subdued, with total proceeds falling to $2.98bn, the lowest level in recent years, compared with $6.99bn in 2024.

Private venture capital activity totaled $21.94bn in 2025, declining modestly from 2024's $23.63bn. Public/other raises reached $26.75bn in 2025, edging above 2024's $25.38 bn, while follow-on offerings totaled $29.54bn, down from 2024's peak of $46.1bn but higher than 2022-2023 levels.

Figure 1: Biopharma money raised since 2019



Source: BioWorld

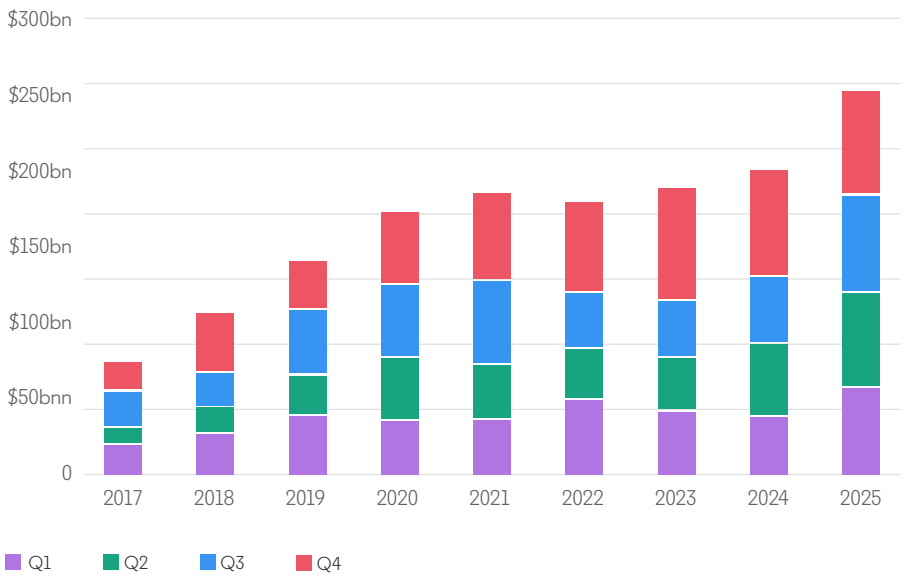
Biopharma financing activity showed early signs of recovery in Q1 2026 across most categories. IPO activity totaled $2.2bn, more than doubling the $1.05bn raised in Q1 2025 and increasing 97% from Q4 2025's $1.11bn. Follow-on financings totaled $9.3bn in Q1 2026, tripling the $3.07bn raised in Q1 2025. The strong start represents one of the highest first-quarter totals in recent years, exceeding both the 2025 quarterly average of $7.38bn and the 2020-2025 average of $8.1bn per quarter.

Private financings totaled $6.3bn in Q1 2026, essentially flat compared with Q1 2025's $6.32bn. Series B rounds accounted for the largest share of total value at 36%, followed by series A at 32% and series C+ at 24%, while seed rounds contributed 8%. By volume, series A deals led at 37%, followed by series B at 30%, seed rounds at 20% and series C+ at 12%, indicating that although capital value remains concentrated in later stages, deal flow continues to be driven by earlier-stage companies.

Pharma locks in innovation pipelines with strategic partnerships

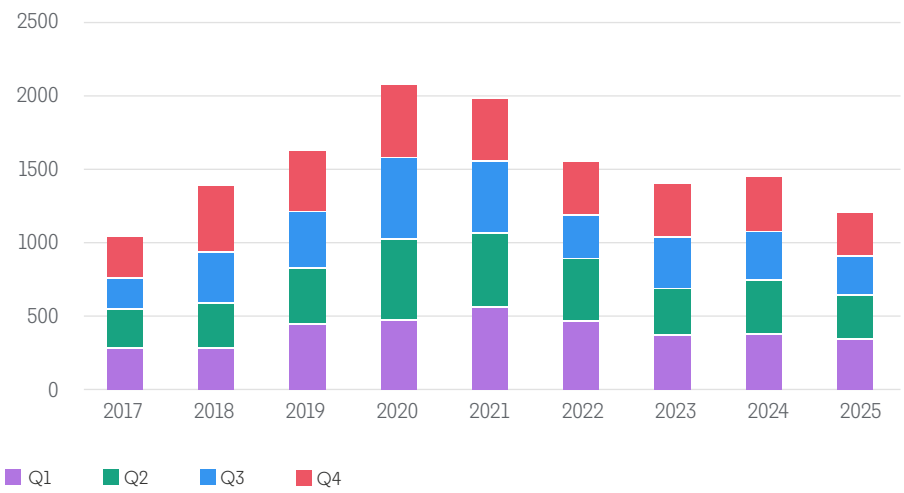
In 2025, biopharma deals hit the highest annual total in BioWorld's records, at $292.6bn, representing a 27% increase from the $230.5bn recorded in 2024 (Figure 2). This value was spread over fewer deals than in previous years, with only 1,173 transactions completed in 2025 compared with 1,429 in 2024, representing an 18% decrease (Figure 3).

Figure 2: 2025 deal values set a BioWorld record



Source: BioWorld and Cortellis Deals Intelligence

Figure 3: The number of biopharma transactions continues to fall



Source: BioWorld and Cortellis Deals Intelligence

GSK led 2025 deal values with multi-program Hengrui partnership valued at $12.5bn

Oncology indications dominated the top deals announced in 2025, while immunology had a strong presence (Table 1). Capturing both of those areas, GSK led deal values with its agreements with Hengrui Pharma to develop up to 12 programs that are expected to complement GSK's respiratory, immunology and inflammation (RI&I) and oncology pipelines. Included in the agreements is an exclusive worldwide license (excluding Mainland China, Hong Kong, Macau and Taiwan) for HRS-9821, a PDE3/4 inhibitor to treat COPD that has shown promising efficacy in early clinical and preclinical studies (Sami, 2025b).

It also could be administered via a convenient dry-powder inhaler (DPI) formulation, fitting nicely into GSK's established portfolio.

GSK also gains access to 11 additional programs in development, each with individual financial structures. The agreements overall commanded $500m up front with up to $12bn in potential milestones. Development of these programs through completion of phase 1 trials is the responsibility of Hengrui Pharma, while GSK retains the exclusive option for further development and commercialization at the end of phase 1 or earlier.

Table 1: Top ten biopharma deals announced in 2025 by total potential value

Principal	Partner	Therapy area	Date announced	Potential value ($bn)
Hengrui Pharma	**GSK**	Respiratory, immunology, inflammation and oncology	07/28/2025	12.5
Innovent Biologics	**Takeda**	Oncology	10/21/2025	11.4
BioNTech	**Bristol Myers Squibb Co**	Oncology	06/02/2025	11.1
3SBio Inc	**Pfizer Inc**	Oncology	05/19/2025	6.2
Xtalpi Inc	**Dovetree**	Oncology and other nondisclosed diseases	08/07/2025	6.0
Monte Rosa Therapeutics	**Novartis**	Immunology	09/15/2025	5.8
Zealand Pharma	**Roche**	Metabolic	03/11/2025	5.6
Argo Biopharmaceutical Co. Ltd	**Novartis**	Cardiovascular	09/03/2025	5.4
CPSC Pharmaceutical Group Ltd	**AstraZeneca**	Immunology and other chronic diseases	06/13/2025	5.3
Harbour Biomed Therapeutics	**AstraZeneca**	Immunology and oncology	03/21/2025	4.7

Source: Cortellis Deals Intelligence

Takeda strengthens its late-stage oncology pipeline

Later in the year, Takeda and Innovent Biologics announced a collaboration worth up to $11.4bn to codevelop and commercialize up to three immuno-oncology and ADC assets targeting solid tumors (Chu, 2025b). The deal centers on two phase 3 candidates: IBI-363, a potentially first-in-class PD-1/IL-2αbias bispecific antibody fusion protein being evaluated in late-stage development for non-small cell lung cancer (NSCLC) and colorectal cancer, and IBI-343, a next-generation Claudin 18.2-targeting ADC in phase 3 trials for gastric cancer and showing promise for pancreatic cancer. Takeda also secured an exclusive option for IBI-3001, an early-stage bispecific ADC targeting EGFR and B7H3 currently in phase 1 trials for locally advanced or metastatic solid tumors.

In addition to $1.2bn up front, Innovent Biologics could receive up to $10.2bn in development, regulatory and commercial milestones, plus royalties. This deal strengthens Takeda's oncology pipeline with late-stage, potentially best-in-class assets in high-mortality cancers, leveraging Takeda's expertise in oncology modalities to accelerate programs that address longstanding unmet needs across multiple solid tumor indications.

BioNTech validates oncology pivot while Bristol Myers Squibb gains late-stage bispecific

In another deal focused on oncology, BioNTech and Bristol Myers Squibb agreed to an $11.1bn collaboration around pumitamig (BNT-327/BMS986545), a bispecific antibody targeting PD-L1 and VEGF, which are two well-established tumor growth mechanisms. BioNTech acquired pumitamig through its $950m purchase of Mainland China-based Biotheus in November 2024. The companies will share development costs and profits for three indications: first-line extensive stage SCLC and NSCLC and triple-negative breast cancer (all in phase 3 trials). Both parties retain rights to independently develop BNT-327 for additional indications and in combination with proprietary assets.

The deal structure includes $1.5bn up front plus $2bn in non-contingent payments spread annually through 2028, with BioNTech eligible for an additional $7.6bn in development, regulatory and commercial milestones. This partnership was strategically important for BioNTech, validating its oncology pipeline beyond COVID-19 vaccines and strengthening its financial position. The deal also provides BioNTech access to Bristol Myers Squibb's established immuno-oncology expertise, helping to accelerate a promising asset in a competitive bispecific class where recent comparable deals demonstrated significant industry interest.

Record deal values in early 2026 continue a strategic shift to mega-partnerships

Biopharma deal-making opened 2026 with strong momentum, reaching $79.22bn in Q1, a 17% increase from Q1 2025 ($67.6bn) and the highest first-quarter total recorded by BioWorld in recent years. At $31.16bn in total value for deals, January ranked the highest first month in the past eight years.

However, deal volume declined approximately 9% to 312 transactions from 344 in Q1 2025, continuing a gradual downtrend from 2020-2021.

This reflects the increasingly selective deal-making environment where fewer, larger transactions dominate: 29 deals valued at $1bn or more have generated nearly $80bn as of May 12, 2026, representing more than three-quarters of deals announced so far this year. This concentration mirrors recent quarters, with blockbuster deals comprising 71% of Q4 2025 value and 78% of Q3 2025 value, underscoring the continued shift toward high-value strategic partnerships over smaller transactions.

Table 2: Top ten biopharma deals announced in 2026 (as of May 12), by total potential value

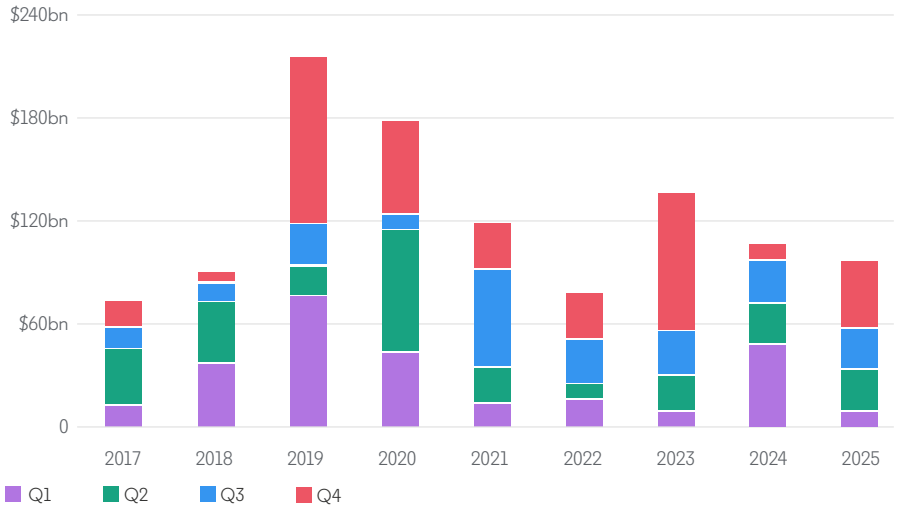
Principal	Partner	Therapy area	Date announced	Potential value ($bn)
Hengrui Pharma	**Bristol Myers Squibb**	Oncology, hematology and immunology	05/12/2026	15.2
Innovent Biologics	**Eli Lilly and Co**	Immunology and oncology	02/10/2026	8.9
RemeGen Co Ltd	**AbbVie**	Oncology	01/12/2026	5.6
CSPC Pharmaceutical Group Ltd	**AstraZeneca**	Immunology	01/31/2026	4.7
Ribocure Pharmaceuticals	**Madrigal Pharmaceuticals Inc**	Hepatology	02/11/2026	4.5
Insilico Medicine Inc	**Eli Lilly and Co**	Multiple	03/29/2026	2.8
Earendil Labs Inc	**Sanofi**	Immunology and inflammation	01/05/2026	2.6
Genevant Sciences and Arbutus Biopharma Corp	**Moderna**	Infectious diseases	03/03/2026	2.3
Quotient Therapeutics	**Merck**	Inflammation and gastrointestinal	03/24/2026	2.2
Vivtex Corp	**Novo Nordisk**	Endocrine/metabolic	02/25/2026	2.1

Source: Cortellis Deals Intelligence

M&A holds steady as buyers fill pipeline gaps

Unlike the surge in deal values, biopharma M&A value dropped 10% from the $108.1bn in 2024 to $96.81bn in 2025, continuing the downward trajectory from the high in 2019 (Figure 4).

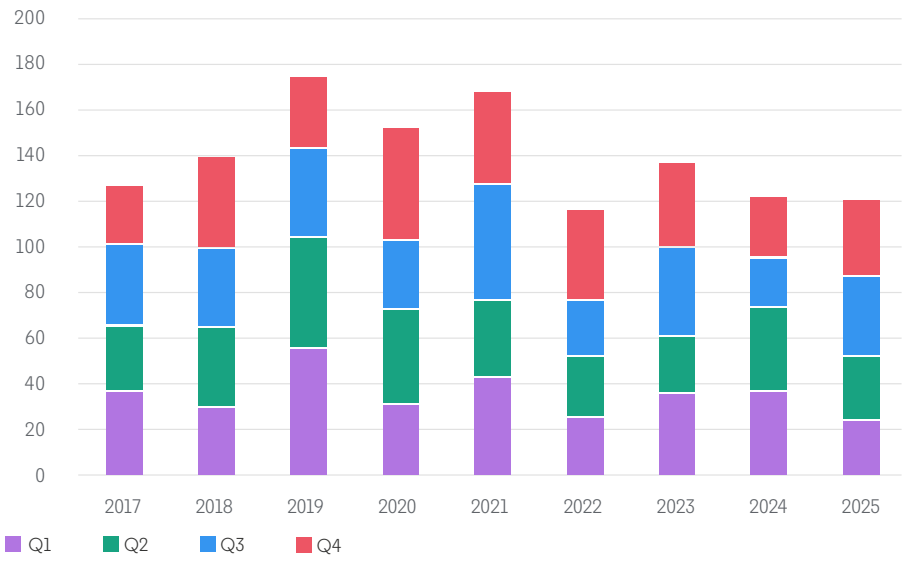
Figure 4: The potential M&A value in 2025 decreased 10% from 2024



Source: BioWorld and Cortellis Deals Intelligence

Biopharma M&A volume reached 33 transactions in the fourth quarter of 2025, bringing the full-year total to 119 deals (Figure 5). Full-year M&A volume was largely flat year over year compared with 120 transactions in 2024, though it remained below the higher levels recorded earlier in the decade.

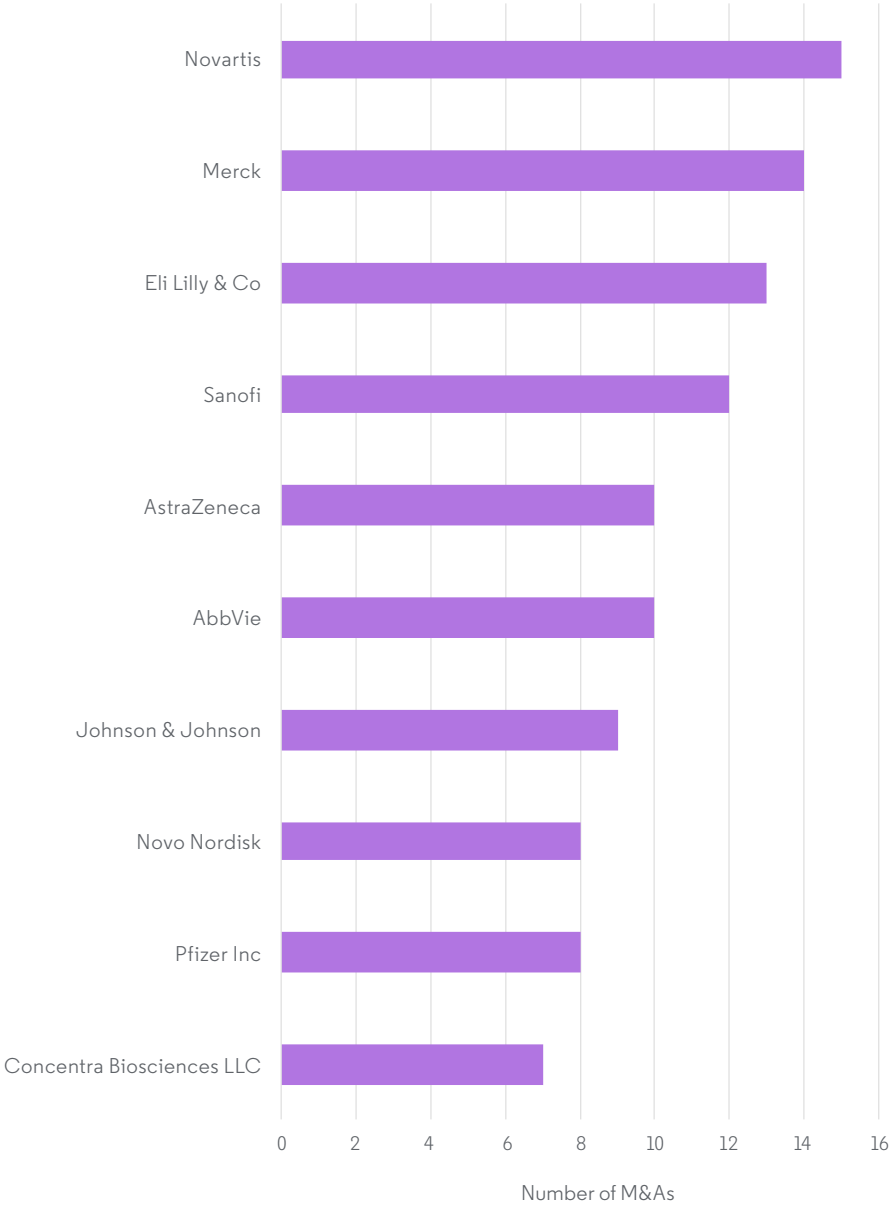
Figure 5: M&A volume in 2025 remained steady



Source: BioWorld and Cortellis Deals Intelligence

Large pharma companies led the buying momentum over the last five years (Figure 6). Novartis, Merck, Eli Lilly and Co, Sanofi, AstraZeneca and AbbVie all had at least ten M&As in 2021-2025. At number one, Novartis' 15 transactions totalled up to $24.4bn, while Merck spent more, reaching up to $55.2bn for 14 transactions. Meanwhile, Eli Lilly and Co committed to only $15.6bn for its 13 M&As that placed it at the number three spot for volume.

Figure 6: Top 10 buyers in terms of the number of M&As, 2021-2025



Source: Cortellis Deals Intelligence

However, Johnson & Johnson led the pack in terms of M&A values recorded in 2025 (Table 3). Buying Intra-Cellular Therapies for an equity value of about $14.6bn, Johnson & Johnson acquired the rights to CAPLYTA® (lumateperone), a once-daily oral therapy approved for adults with schizophrenia as well as depressive episodes associated with bipolar I or II disorder (Osborne, 2025a). Johnson & Johnson saw this asset as a natural fit within their existing neuropsychiatric portfolio.

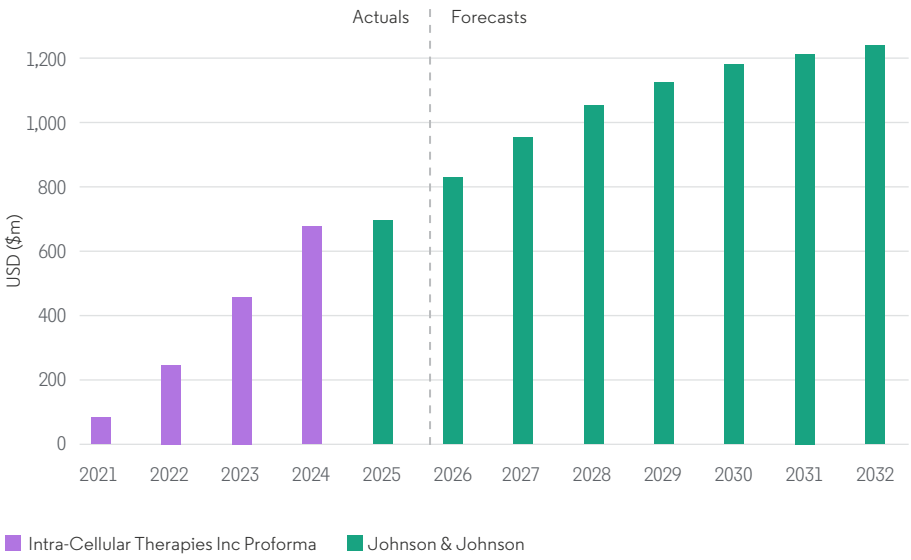
Table 3: Top ten biopharma M&A transactions announced in 2025 by total potential value

Target	Acquirer	Focus	Date announced	Potential value ($bn)
Intra-Cellular Therapies Inc	**Johnson & Johnson**	Neurology	01/23/2025	14.6
Avidity Biosciences Inc	**Novartis**	Neurology	10/26/2025	12.5
Verona Pharma plc	**Merck**	Cardiopulmonary	07/09/2025	10.0
Metsera Inc	**Pfizer Inc**	Obesity	09/22/2025	10.0
Blueprint Medicines Corporation	**Sanofi**	Immunology	06/02/2025	9.5
Cidara Therapeutics Inc	**Merck**	Infectious diseases	11/14/2025	9.2
Merus	**Genmab**	Oncology	09/29/2025	8.0
Akero Therapeutics Inc	**Novo Nordisk**	Hepatology	10/09/2025	5.2
Amicus Therapeutics	**BioMarin Pharmaceutical Inc**	Rare diseases	12/19/2025	4.8
SpringWorks Therapeutics Inc	**Merck**	Oncology	04/28/2025	3.9

Source: Cortellis Deals Intelligence

Although CAPLYTA sales were relatively flat for the first year of Johnson & Johnson ownership, Clarivate analysts forecast sales of >$1.2bn annually by 2031 (Figure 7). In addition, Johnson & Johnson gained access to ITI-1284, a phase 2 candidate undergoing tests in generalized anxiety disorder (GAD) and Alzheimer's disease (AD)-related psychosis and agitation.

Figure 7: Actual and Clarivate analyst-forecasted global CAPLYTA sales



Source: Cortellis Competitive Intelligence

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So far in 2026, Sun Pharmaceutical Industries of Mumbai, India, tops the M&A list with its offer of $11.75bn for Organon, a company focused on women's health (Table 4; Chu, 2026). A spin-off from Merck, Organon's products include Nexplanon and Nuvaring as well as over-the-counter (OTC) brands such as Claritin, Propecia and Singulair and biosimilar drugs like Hadlima (dalimumab-bwwd), Ontruzant (trastuzumab-dttb) and Poherdy (pertuzumab-dpzb).

Table 4: Top ten biopharma M&A transactions announced in 2026 (as of May 6), by total potential value

Target	Acquirer	Focus	Date announced	Potential value ($bn)
Organon	Sun Pharmaceutical Industries Ltd	Women's health	04/26/2026	11.8
Arcellx	Gilead Sciences (Kite, a Gilead company)	Oncology	02/23/2026	7.8
Centessa Pharmaceuticals plc	Eli Lilly and Co	Sleep and wake disorders	03/31/2026	7.8
Kelonia Therapeutics Inc	Eli Lilly and Co	Oncology	04/20/2026	7.0
Terns Pharmaceuticals Inc	Merck	Oncology	03/25/2026	6.7
Apellis Pharmaceuticals Inc.	Biogen	Immunology, rare diseases	03/31/2026	5.6
Tubulis	Gilead Sciences	Oncology	04/07/2026	5.0
Pikavation Therapeutics Inc, a wholly- owned subsidiary of Synnovation Therapeutics LLC	Novartis	Oncology	03/20/2026	3.0
Soleno Therapeutics Inc	Neurocrine Biosciences Inc	Endocrinology, rare diseases	04/25/2026	2.9
Day One Biopharmaceuticals Inc	Servier	Oncology	03/06/2026	2.5

Source: Cortellis Deals Intelligence

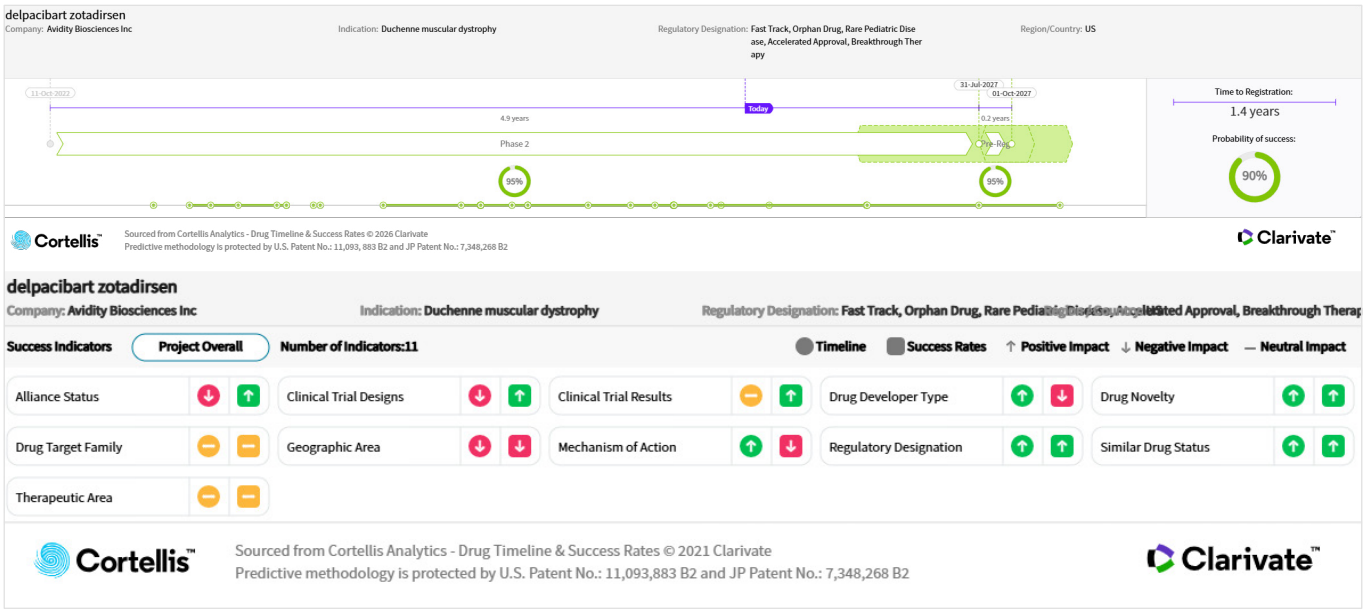
Novartis pursues strategic platform acquisitions in RNA, degraders and radiopharmaceuticals

With 15 acquisitions totaling $24.4bn and deal totals of up to $44.5bn from 2021 to 2025 and strategic deal-making continuing into 2026, Novartis is pursuing a focused strategy around RNA therapeutics for neuromuscular and cardiovascular diseases, next-generation oncology platforms to extend product lifecycles and protein degraders for immunology. The company's $12.5bn acquisition of Avidity Biosciences announced in October 2025, the second-largest deal of the year, signals its commitment to becoming the leader in RNA-based treatments for genetic muscle diseases.

Neuromuscular disease: RNA platforms at center stage

The acquisition of Avidity Biosciences brought three late-stage antibody oligonucleotide conjugates (AOCs) designed to deliver RNA directly to skeletal muscle and heart tissue (Landenberger, 2025d). Lead candidate delpacibart zotadirsen (del-zota) uses phosphorodiamidate morpholino oligomers to skip exon 44 of the dystrophin gene, enabling dystrophin production for Duchenne muscular dystrophy (DMD). Cortellis data indicate there is a 90% probability of success for del-zota in the United States (Figure 8).

Figure 8: Success rate and indicators for del-zota in the United States



Source: Drug Timeline & Success Rates

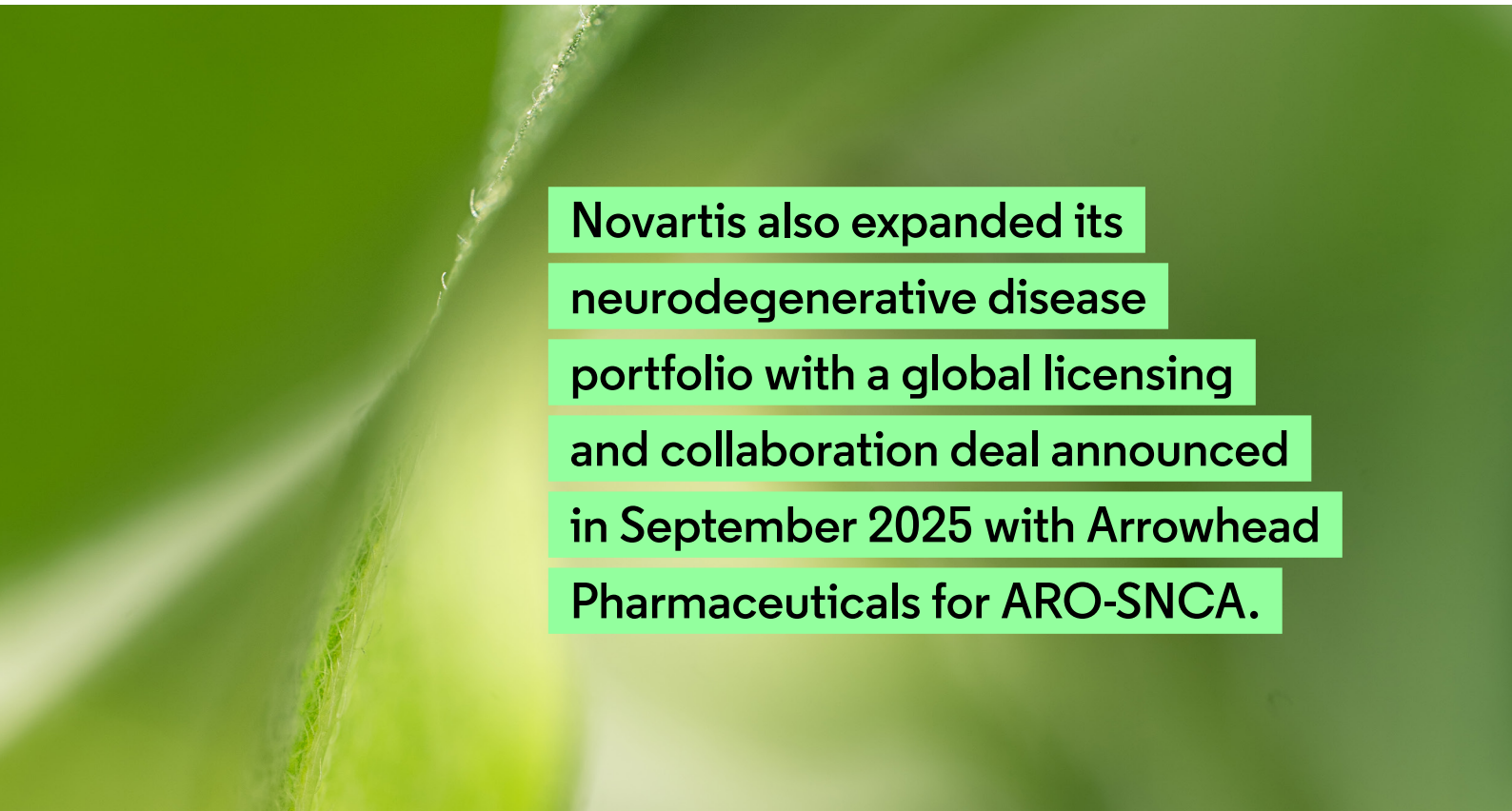
The second program, zeleciment basivarsen (z-basivarsen, formerly DYNE-101) is currently in phase 1 for myotonic dystrophy type 1 (DM1). A third program targets facioscapulohumeral muscular dystrophy (FSHD).

Avidity Biosciences' AOC platform complements the company's earlier $1.3bn acquisition of Kate Therapeutics in November 2024 (Carey, 2024). Kate Therapeutics brought preclinical AAV-based gene therapies for the same three diseases (DMD, FSHD and DM1) developed using its DELIVER (Directed Evolution of AAV Capsid Leveraging In Vivo Expression of Transgene RNA) platform.

Novartis also expanded its neurodegenerative disease portfolio with a global licensing and collaboration deal announced in September 2025 with Arrowhead Pharmaceuticals for ARO-SNCA, a preclinical siRNA therapy targeting alpha-synuclein for Parkinson's disease (PD) and other synucleinopathies (Osborne, 2025c). The deal includes a $200m upfront payment with up to $2bn in development, regulatory and sales milestones plus tiered royalties.

Earlier RNA bets in neuroscience included DTx Pharma ($1.1bn, June 2023) for DTx-1252, an siRNA targeting PMP22 mRNA for Charcot-Marie-Tooth disease type 1A (CMT1A) (Landenberger, 2023a). DTx Pharma also brought two early-stage programs in neuromuscular and CNS indications from its FALCON (fatty acid ligand conjugated oligonucleotide) platform. DTx Pharma was one of the seven picks in the Clarivate RNA Technology Companies to Watch report.

A partnership worth up to $2.9bn with PTC Therapeutics (December 2024) added PTC518, an oral mRNA splicing modifier for Huntington's disease, replacing Novartis' discontinued branaplam program that failed due to peripheral neuropathy (Osborne, 2024b). In early 2026, Novartis also gained rights to Scineuro Pharmaceuticals Inc's amyloid beta-targeted antibody program for AD, worth up to $1.7bn.

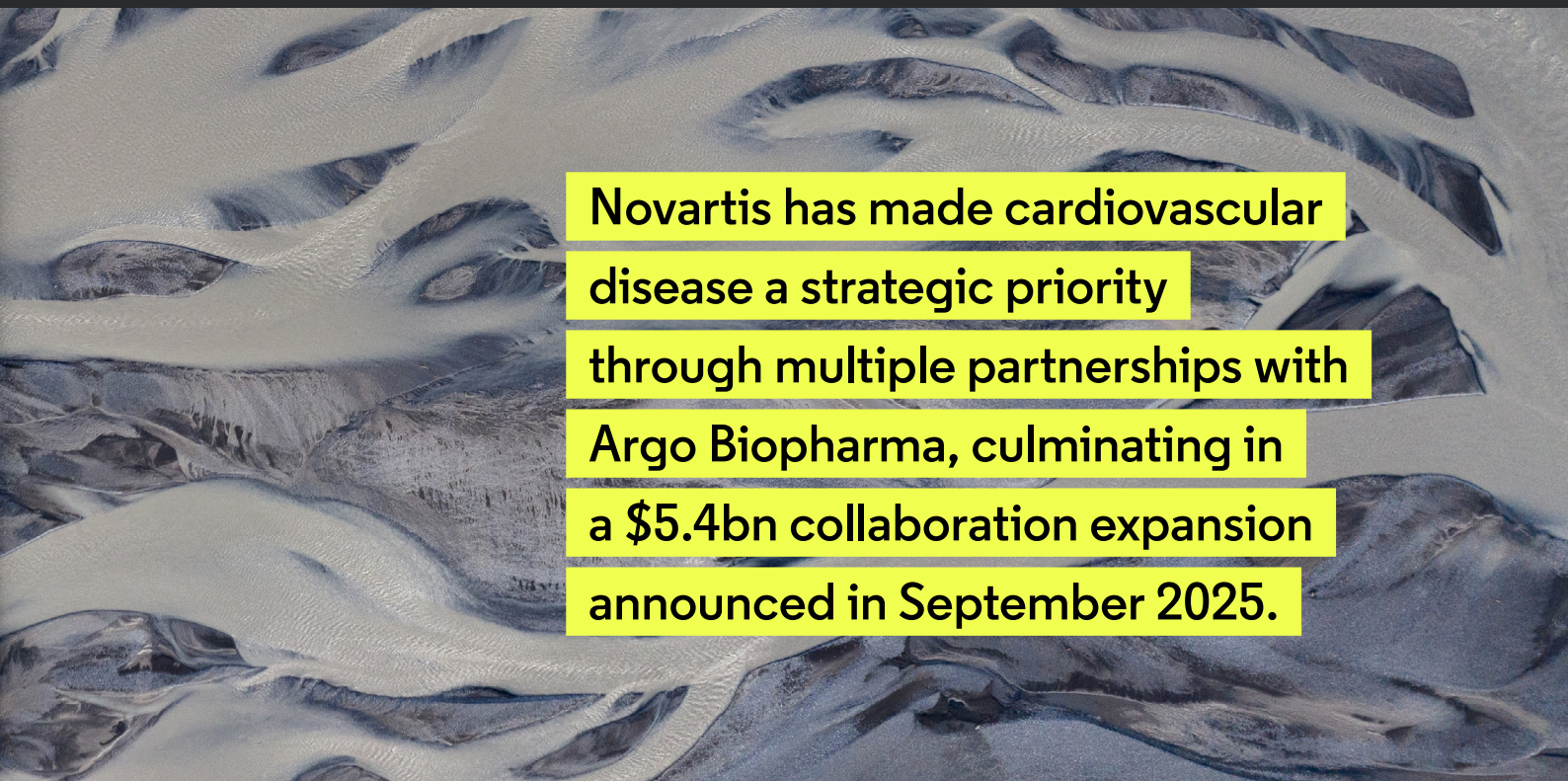


Cardiovascular disease: long-acting siRNAs and novel mechanisms

Novartis has made cardiovascular disease a strategic priority through multiple partnerships with Argo Biopharma, culminating in a $5.4bn collaboration expansion announced in September 2025, the companies' third transaction (Boggs, 2025c). The latest deal includes a right of first negotiation to BW-00112, an angiopoietin-like protein 3 (ANGPTL3)-targeting siRNA in phase 2 testing in severe hypertriglyceridemia (sHTG) in addition to an option to license ex-Mainland China rights to two discovery-stage next-generation candidates for sHTG and mixed dyslipidemia. Argo Biopharma received $160m upfront and is eligible for up to $5.2bn in milestones plus tiered royalties. Earlier 2024 deals with Argo worth $4.17bn granted Novartis ex-Mainland China rights to siRNA therapies targeting cardiovascular disease (BW-02 and BW-05) (Chu, 2024).

Beyond siRNAs, Novartis agreed to pay $3.1bn in February 2025 for Anthos Therapeutics and abelacimab, a fully human monoclonal antibody Factor XI inhibitor for anticoagulation in atrial fibrillation (Landenberger, 2025a). Anthos was formed six years earlier with $250m from Blackstone, which in-licensed the asset after Novartis had shelved it.

Tourmaline Bio (up to $1.4bn, announced September 2025) brought pacibekitug, a long-acting anti-IL-6 IgG2 monoclonal antibody for atherosclerotic cardiovascular disease (ASCVD) and thyroid eye disease (Carey, 2025). The drug was previously set aside by Pfizer Inc for autoimmune disorders. In addition, Novartis entered a $1.8bn partnership with Unnatural Products in February 2026 that applies AI-enhanced macrocyclic peptide technology to cardiovascular targets, with Novartis paying $100m upfront plus up to $1.7bn in milestones and mid-single to low-double-digit royalties (Carey, 2026d).



Oncology: next-generation PI3Kα and radiopharmaceuticals

Facing competition to first-generation PI3Kα inhibitor PIQRAY® (alpelisib) in breast cancer, Novartis agreed to pay up to $3bn in March 2026 to acquire Pikavation Therapeutics (a wholly owned subsidiary of Synnovation Therapeutics) and SNV-4818, a pan-mutant selective PI3Kα inhibitor (Boggs, 2026b). The deal positions Novartis against Eli Lilly and Co's tersolisib (STX-478, acquired via the $2.5bn buyout of Scorpion Therapeutics). Under the agreement, Novartis will handle all development and commercialization while Synnovation Therapeutics continues operating independently on SNV-1521 and other pipeline programs.

Novartis' $2.9bn acquisition of MorphoSys announced in February 2024 brought pelabresib (CPI-0610), a first-in-class small-molecule BET inhibitor in phase 3 trials in combination with ruxolitinib for myelofibrosis and second-line essential thrombocythemia (Moran, 2024a). Tulmimetostat (CPI-0209), an early-stage dual EZH1/EZH2 inhibitor for solid tumors and lymphomas, was also included.

Mariana Oncology (up to $1.75bn, announced May 2024) added MC-339 ([225Ac]Ac-ETN029), a radioligand therapy in phase 1 for SCLC, complementing Novartis' existing radiopharmaceutical portfolio including marketed PLUVICTO (Lu-177 vipivotide tetraxetan) or mCRPC and LUTATHERA (Lu-177 dotatate) for somatostatin receptor-positive gastroenteropancreatic neuroendocrine tumors (GEP-NETs) (Osborne, 2024).

Novartis Pharma, a Novartis subsidiary, entered into a strategic collaboration with Dren Bio Inc to discover and develop bispecific antibodies against cancer using the latter's proprietary Targeted Myeloid Engager and Phagocytosis Platform (Landenberger, 2024c). In the deal, Dren Bio Inc could earn up to $3bn for targeted myeloid engager programs.

Immunology and allergy: protein degraders and novel mechanisms

Novartis deepened its relationship with Monte Rosa Therapeutics through a $5.8bn collaboration expansion in September 2025 to develop molecular glue degraders for immune-mediated diseases using Monte Rosa's AI/ML-enabled QuEEN platform for degrader discovery (Landenberger, 2025c). This is the companies' second agreement following a global exclusive license for VAV1 degraders including MRT-6160 worth up to $2.25bn announced in October 2024. Under the new deal, Monte Rosa receives $120m upfront plus option maintenance payments, with total potential value reaching $5.7bn including preclinical milestones, option exercises and development, regulatory and sales milestones, plus high single to low double-digit tiered royalties.

In December 2025, Relation Therapeutics Ltd. entered a $1.7bn collaboration with Novartis to develop multiple programs targeting atopic diseases caused by immune dysregulation (BioWorld, 2025b). Relation Therapeutics' Lab-in-the-Loop AI-powered discovery platform uses intensive computing to compare gene expression profiles of fresh patient tissue against healthy volunteers, and Novartis has global development and commercialization rights to any targets that emerge.

In the allergy space, Novartis paid $2bn in March 2026 to acquire Excellergy just five months after the company's $70m series A, gaining trifunctional allergic effector cell response inhibitors (ECRIs) (Carey, 2026f). Lead candidate Exl-111 recently entered phase 1. The acquisition builds on Novartis' existing allergy portfolio including IgE inhibitor XOLAIR® (omalizumab, partnered with Genentech, approved 2003 for asthma, 2024 for food allergies) and BTK inhibitor RHAPSIDO® (remibrutinib, approved 2025 for chronic spontaneous urticaria).

Merck fortifies oncology while diversifying into immunology and rare diseases

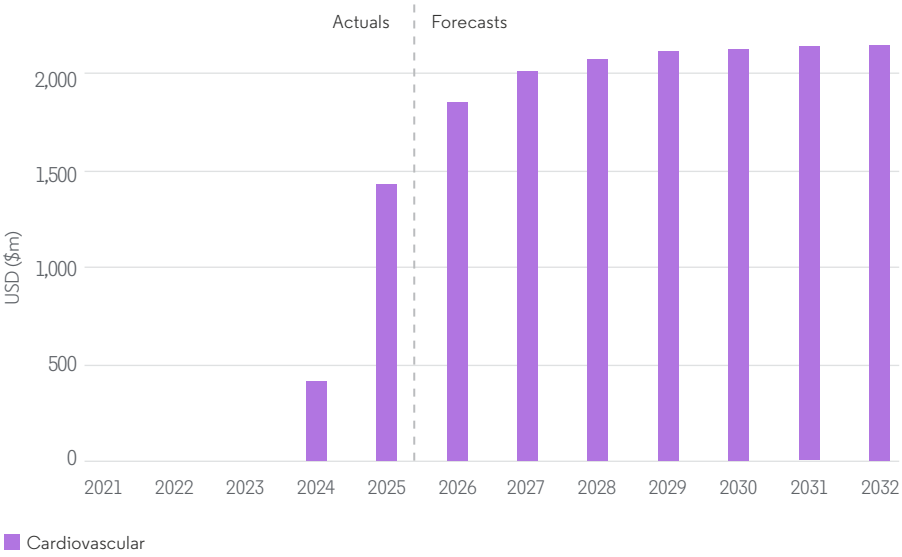
Merck has consistently ranked among the top pharma spenders over the past five years, alternating between blockbuster acquisitions and broader deal distribution strategies. With 14 M&As totaling up to $55.2bn and deal values reaching $39.9bn from 2021 to 2025, plus strategic deal-making continuing into 2026, the company has pursued a dual, long-term strategy: building a post-Keytruda oncology portfolio through targeted immunotherapy partnerships while simultaneously diversifying into high-value therapeutic areas including hematology, pulmonary disease, immunology and neurological/rare disorders.

Merck has consistently ranked among the top pharma spenders over the past five years.

Hematology and blood disorders

Merck's $11.5bn acquisition of Acceleron Pharma Inc in September 2021 brought two potential blockbusters: the already marketed Reblozyl® (luspatercept-aamt), the first erythroid maturation agent approved for treating anemia in certain blood disorders, and sotatercept for pulmonary arterial hypertension (PAH), which gained FDA approval as WINREVAIR™ in March 2024 and reached blockbuster status in 2025 (Figure 9; Osborne and Landenberger, 2021). The latter is part of a global collaboration with Bristol Myers Squibb. The deal established Merck's hematology platform, which expanded with Imago Biosciences Inc. ($1.35bn, November 2022) for bomedemstat (IMG-7289), an orally available LSD1 inhibitor in phase 3 trials for essential thrombocythemia, myelofibrosis and polycythemia vera (Osborne, 2022).

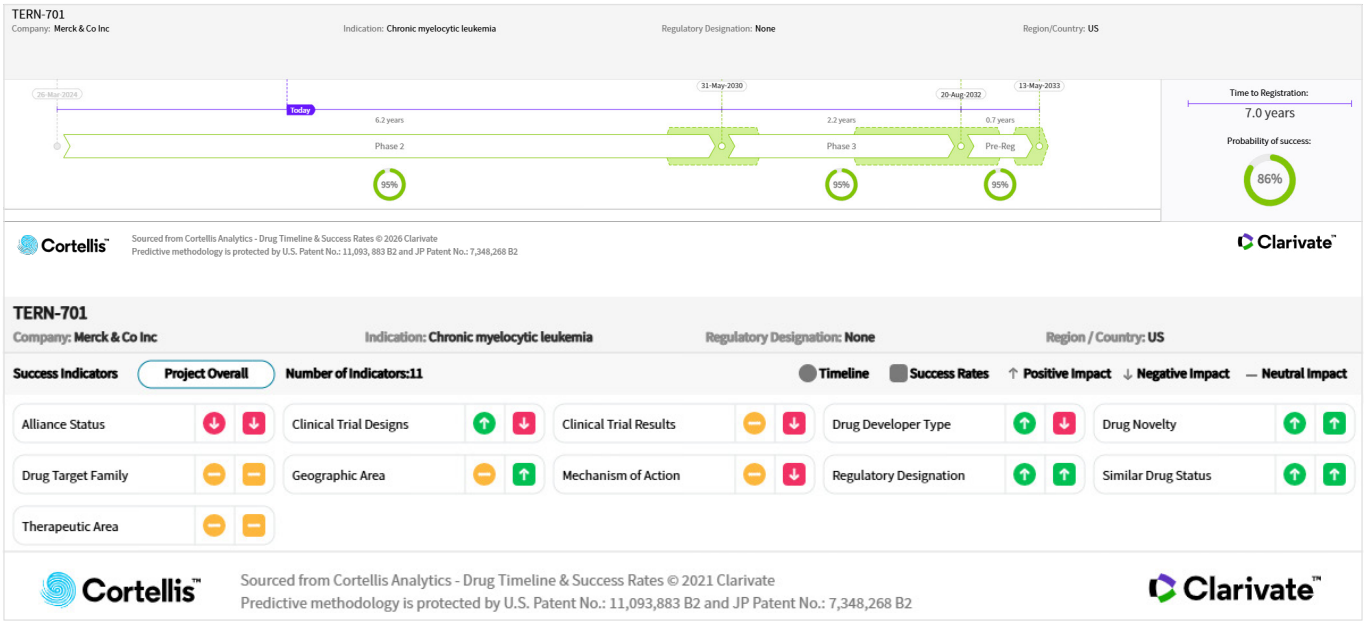
Figure 9: Actual and Clarivate analyst-forecasted global WINREVAIR sales



Source: Cortellis Competitive Intelligence

To help defend against Keytruda's pending patent expiration, Merck's $6.7bn acquisition of Terns Pharmaceuticals Inc announced in March 2026 added TERN-701, a second-generation allosteric BCR-ABL1 tyrosine kinase inhibitor showing phase 1 data in chronic myeloid leukemia (CML) with a 75% overall cumulative major molecular response rate at 24 weeks — outperforming Novartis' SCEMBLIX® (asciminib) and Enliven Therapeutics' ELVN-001 (Boggs, 2026c). Cortellis data indicate there is an 88% probability of success for TERN-701 in the United States (Figure 10).

Figure 10: Success rate and indicators for TERN-701 in the United States



Source: Drug Timeline & Success Rates

Keytruda fortress expansion

To help defend against Keytruda's pending patent expiration through combination strategies, Merck in-licensed LaNova Medicines Ltd's LM-299 (MK-2010; up to $2.7bn, announced November 2024), a PD-1/VEGF bispecific antibody simultaneously blocking PD-1/PD-L1 and VEGF/VEGFR signaling pathways in phase 2 trials for advanced solid tumors in Mainland China (Sami, 2024b). Earlier, Merck acquired Curon Biopharmaceutical Ltd.'s CN-201 (up to $1.3bn, announced August 2024), a CD3xCD19 T-cell engager bispecific antibody that was in phase 1/2 trials for relapsed/refractory non-Hodgkin's lymphoma and B-cell acute lymphocytic leukemia (Sami, 2024a).

Neurology and rare disorders

Merck's $3.9bn acquisition of Springworks Therapeutics in April 2025 brought two marketed products: OGSIVEO® (nirogacestat), a gamma secretase inhibitor approved for adults with progressing desmoid tumors who require systemic treatment, and GOMEKLI® (mirdametinib), a MEK inhibitor for patients with neurofibromatosis type 1 NF1)-associated plexiform neurofibromas (PNs) (Osborne, 2025b).

Merck's $610m acquisition of Caraway Therapeutics in November 2023 added a small-molecule pipeline evaluating new mechanisms of modulation of lysosomal function in neurodegenerative and rare diseases (Osborne, 2023c). The pipeline includes programs targeting TRPML1 for non-central nervous system rare diseases and GBA PD in preclinical development, along with earlier-stage work directed at TMEM175 for PD and amyotrophic lateral sclerosis, and ATP13A2 for PD. Merck, through its MRL Ventures Fund, had been a shareholder of Caraway since the company's 2018 founding.

Merck's $610m acquisition of Caraway Therapeutics in November 2023 added a small-molecule pipeline evaluating new mechanisms of modulation of lysosomal function in neurodegenerative and rare diseases.

Immunology and inflammatory diseases: TL1A and novel discovery platforms

The $10.8bn acquisition of Prometheus Biosciences announced in April 2023 brought tulisokibart (MK-7240, formerly PRA-023), a humanized monoclonal antibody targeting TL1A. TL1A's links to intestinal inflammation and fibrosis position tulisokibart as a potential backbone therapy across multiple immune-mediated diseases. MK-7240 is in development for Crohn's disease, ulcerative colitis, systemic sclerosis-associated interstitial lung disease, axial spondyloarthritis, hidradenitis suppurativa and rheumatoid arthritis (Osborne, 2023a).

Marking its third major deal since its founding only four years prior, Quotient Therapeutics Inc partnered with Merck (up to $2.2bn, $20m upfront, announced March 2026) to identify novel drug targets for inflammatory bowel disease using its somatic genomics platform, which interrogates patient tissue for somatic genetic mutations accumulated over a lifetime (Carey, 2026e).

Mestag Therapeutics Ltd (up to $1.9bn, announced October 2024) partnered with Merck to apply its activated fibroblast technology modeling the pathogenic role of fibroblasts in inflammatory diseases (Moran, 2024b). Merck received options to license one or more novel targets up to a prespecified number, with Merck handling all subsequent discovery, development and commercialization.

Pulmonary disease: de-risked commercial assets

Merck has committed to significant amounts for pulmonary disease. Its $10bn acquisition of Verona Pharma in 2025 brought OHTUVAYRE® (ensifentrine), approved for COPD in June 2024 as the first inhaled nonsteroidal therapy combining bronchodilator and anti-inflammatory mechanisms (Landenberger, 2025c). The dual-action PDE3/PDE4 inhibitor, approved as add-on therapy and monotherapy, is in clinical trials for non-cystic fibrosis bronchiectasis, with blockbuster status expected by 2028, according to Cortellis forecasts, and patent exclusivity through the mid-2030s.

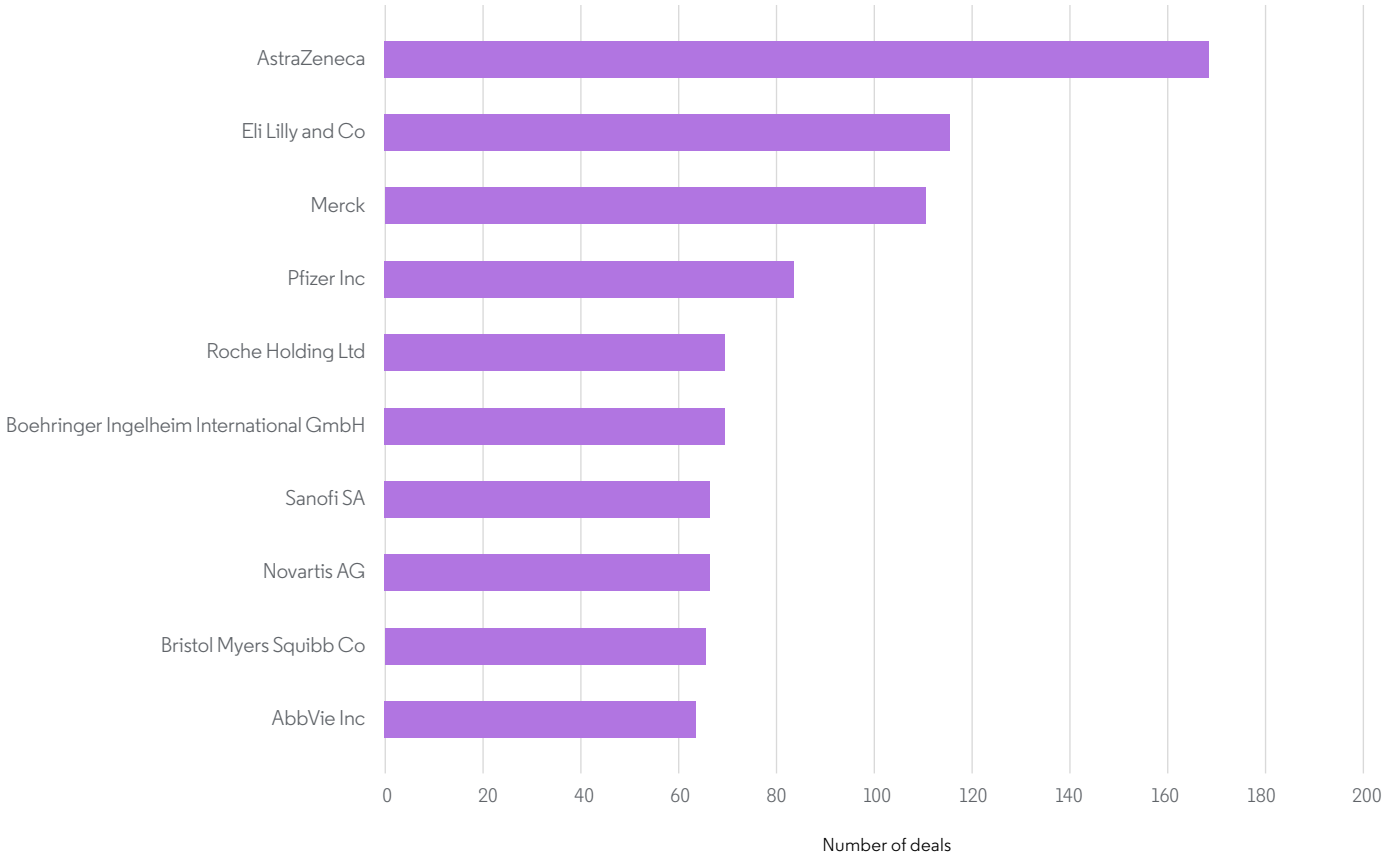
Merck's $9.2bn acquisition of Cidara Therapeutics in November 2025 added CD-388, a strain-agnostic drug-Fc conjugate comprising multiple copies of small-molecule neuraminidase inhibitor for preventing influenza A and B, with FDA fast track and breakthrough therapy designations (Landenberger, 2025f).

Eli Lilly and Co's spending spree builds beyond obesity

With $15.6bn committed across 13 M&As and deals totaling up to $37.9bn from 2021 to 2025, according to Cortellis Deals Intelligence data, and aggressive deal-making continuing into 2026, Eli Lilly and Co has emerged as one of biopharma's most active strategic buyers (Figure 11).

The company's shopping list reveals a clear strategy, leveraging its GLP-1 windfall profits: build next-generation franchises in validated therapeutic areas (oncology, metabolic disease, immunology) while establishing early positions in transformative modalities (in vivo gene therapy, AI-driven discovery, radiopharmaceuticals).

Figure 11: Most active pharma companies for asset purchases and licensing deals, 2021-2025



Source: Cortellis Deals Intelligence

Oncology: precision platforms and next-generation CAR-T

The $8.9bn Innovent Biologics partnership announced in February 2026 extends Eli Lilly and Co's oncology reach through a novel cross-border structure: Innovent Biologics leads development from concept through phase 2 proof-of-concept in Mainland China, while Eli Lilly and Co gains exclusive worldwide rights for development and commercialization outside of greater China (Sami, 2026a).
The deal continues the companies' relationship that dates to 2015 when Lilly Asia Ventures first invested in Innovent Biologics' series C round and formed a $456m oncology alliance.

Eli Lilly and Co committed $7bn in April 2026 to acquire Kelonia Therapeutics and its in vivo gene therapy platform for CAR-T generation (Osborne, 2026). Kelonia's lead program, KLN-1010, is a one-time intravenous gene therapy that generates anti-BCMA CAR-T cells currently in phase 1 for multiple myeloma.

This followed Eli Lilly and Co's February 2026 acquisition of Orna Therapeutics for up to $2.4bn, gaining ORN-252, a phase 1-ready CD19-targeting in vivo CAR-T for B-cell-driven autoimmune diseases, plus its circular RNA platform and lipid nanoparticle delivery technologies (Boggs, 2026a). A second Orna candidate targeting BCMA showed promising preclinical data in multiple myeloma. The deals position Eli Lilly and Co in the emerging in vivo CAR-T race alongside Bristol Myers Squibb's $1.5bn Orbital Therapeutics purchase (October 2025), AbbVie's $2.1bn Capstan acquisition (June 2025) and Gilead's Kite Therapeutics' $350m Interius deal (August 2025).

In precision oncology, Eli Lilly and Co announced its intent to acquire Ajax Therapeutics for up to $2.3bn in April 2026, gaining AJ1-11095, a once-daily oral type II JAK2 inhibitor in phase 1 for patients with myelofibrosis previously treated with type I JAK2 inhibitors (Carey, 2026h). This deal builds on Eli Lilly and Co's blood cancer capabilities as a founding strategic investor in Ajax.

Eli Lilly and Co also agreed to pay up to $2.5bn in January 2025 for Scorpion Therapeutics and its STX-478, an oral, mutant-selective PI3Kα inhibitor against breast cancer and other solid tumors (Boggs, 2025a). STX-478 is also designed to be CNS-penetrant, offering potential advantages in brain metastases. The deal came after Eli Lilly and Co quietly discontinued its own PI3Kα program (LOXO-783, acquired via the $8bn Loxo Oncology buyout in 2019) in Q2 2024 due to undisclosed issues, making Scorpion a strategic replacement in a validated target (Eli Lilly and Co, 2025).

Eli Lilly and Co's multi-modal oncology approach is further supported by earlier ADC acquisitions, including: Mablink Bioscience (October 2023, undisclosed) via its proprietary PSARLink™ platform (BioWorld, 2023) and Emergence Therapeutics ($12m, announced June 2023) for its Nectin-4-targeting ETx-22 for bladder and triple-negative breast cancer (Lanier, 2023); the $1.4bn POINT Biopharma purchase (October 2023) for radiopharmaceuticals including PNT-2002 (177Lu-PSMA), PNT-2003 (177Lu-dotatate) and actinium-based payloads (Carey, 2023); and the Aktis Oncology Inc. deal (worth up to $1.1bn) to develop radiopharmaceuticals targeting cancer using Aktis' miniproteins discovery platform (Landenberger, 2024).

Sleep disorders: the next opportunity

Eli Lilly and Co announced its $7.8bn acquisition of Centessa Pharmaceuticals in April 2026, gaining a pipeline of orexin receptor 2 (OX2R) agonists for sleep disorders (Carey, 2026g). The lead candidate, cleminorexton (formerly ORX-750), showed positive phase 2a data in narcolepsy types 1 and 2 and idiopathic hypersomnia. The portfolio also includes ORX-142 for neurological and neurodegenerative disorders and ORX-489 for neuropsychiatric disorders. The timing positions Eli Lilly and Co ahead of Takeda's expected Q3 FDA decision on TAK-861 (oveporexton) for narcolepsy type 1 and alongside Alkermes' ALKS-2680 (alixorexton), with both Centessa's cleminorexton and competing programs expected to enter phase 3 registrational trials soon.

Immunology and inflammation: oral alternatives to biologics

Eli Lilly and Co's $1.2bn acquisition of Ventyx Biosciences in January 2026 brought two NLRP3 inhibitors: CNS-penetrant VTX-3232 and peripheral VTX-2735, both targeting chronic inflammation across cardiometabolic, autoimmune and neurological indications (Carey, 2026b). VTX-3232 is in phase 2 for PD and showed positive phase 2 results in October 2025 in obesity-associated cardiometabolic diseases.

The $1.9bn Repertoire Immune Medicines partnership (announced January 2026, $85m upfront) adds tolerizing therapies leveraging T-cell repertoire mapping to restore immune balance in autoimmune diseases. This was Repertoire Immune Medicines' largest deal and fourth major pharma validation of its Decode platform.

Eli Lilly and Co agreed to spend up to $3.2bn in July 2024 to acquire Morphic Holding and its oral integrin therapies, bolstering its inflammatory bowel disease portfolio alongside injectable Omvoh® (mirikizumab-mrkz), approved in October 2023 for moderately to severely active ulcerative colitis (Landenberger, 2024b). Morphic's lead candidate, MORF-057 (now LY-4268989), is in development for inflammatory bowel disease and Crohn's disease. Similarly, the $2.4bn acquisition of Dice Therapeutics in 2023 added oral IL-17 inhibitors DC-806 and DC-853 to complement injectable Taltz (ixekizumab) (Carey, 2023a).

Gene therapy and rare disease: early bets on transformative platforms

Eli Lilly and Co expanded its hearing loss portfolio with Seamless Therapeutics ($1.12bn, announced January 2026), gaining recombinase gene editing technology (Moran, 2026). Under the agreement, Germany-based Seamless will design and program site-specific recombinases to correct mutations in unspecified genes that are related genetic causes of hearing loss, and Eli Lilly and Co will have an exclusive license to the recombinases. This followed a potential $1.35bn global license option agreement with Rznomics Inc announced in May 2025 to codevelop a novel RNA editing gene therapy to treat hereditary hearing loss.

ABL Bio Inc inked a license and research agreement with Eli Lilly and Co worth up to $2.6bn in November 2025 to develop multiple therapeutics using the Grabody-B platform, a blood-brain barrier (BBB)-penetrating bispecific antibody technology (Chu, 2025c).

Metabolic disease: expanding the franchise beyond GLP-1 RAs

However, the company has not abandoned its metabolic heritage. AI-driven discovery partnerships with Nimbus Therapeutics ($1.3bn, $55m upfront) for a novel oral obesity mechanism and Insilico Medicine ($2.8bn expansion, $115m upfront) in early 2026 for metabolic therapies signal Eli Lilly and Co's bet on computational platforms to identify next-generation candidates that will keep it competitive in the growing obesity space (Carey, 2026a; Sami, 2026b).

The deal with Nimbus Therapeutics is the second with Eli Lilly and Co, following a research collaboration and exclusive, worldwide license agreement between the companies in 2022 that focused on therapies targeting adenosine monophosphate-activated protein kinase (AMPK) for metabolic diseases. In the latest, Eli Lilly and Co receives an exclusive, worldwide license to the resulting candidate (with a nondisclosed target).

The deal with Insilico Medicine also continues a previous multiyear relationship designed around early platform access. In the latest agreement, Eli Lilly and Co gains exclusive development and commercialization rights for multiple candidates (with nondisclosed targets), including preclinical oral therapies, generated using Insilico Medicine's AI platform.

The company is also moving into next-generation obesity therapies by acquiring companies in this space. It paid $1.9bn in July 2023 for Versanis Bio and its asset bimagrumab, a monoclonal antibody targeting activin type 2 receptors that

Novartis had abandoned after a phase 2/3 failure in myositis (Landenberger, 2023b). Versanis Bio in-licensed and resurrected the drug for obesity, and it is now in phase 2b as monotherapy and in combination with semaglutide, addressing a key limitation of GLP-1 RAs: muscle loss during weight reduction.

In a deal worth up to $1.2bn, Suzhou Sanegene Bio Inc and Eli Lilly and Co are partnering to advance RNAi candidates for metabolic diseases based on Sanegene's tissue selective delivery technology (Sami, 2025c). Sanegene will be responsible for discovery and identification of the optimized LEAD (ligand and enhancer assisted delivery)-based RNAi molecule for each program, while Eli Lilly and Co will be responsible for the subsequent IND-enabling studies, clinical development and commercialization.

The company is also moving into next-generation obesity therapies by acquiring companies in this space. It paid $1.9bn in July 2023 for Versanis Bio and its asset bimagrumab, a monoclonal antibody targeting activin type 2 receptors.

Mainland China's growing role as a pharma innovation source

As evidenced by the large deals already described with Mainland China-based companies, Mainland China's biotechnology sector has rapidly evolved from a regional player to a strategic sourcing destination for multinational pharmaceutical companies seeking cost-efficient innovation and accelerated development timelines.

Out-licensing deals from Mainland China grew to represent 32% of global transactions in the first half of 2025, up from 21% in 2024 and only 5% in 2020 (Sami, 2025a). The shift reflects growing confidence in Mainland China-generated clinical data, platform technologies and the ability of Chinese biotechs to deliver first-in-class and best-in-class candidates with cost advantages.

The economic case for Mainland China partnerships is compelling (Sami, 2025a). Chinese biotech assets trade at 60% to 70% lower upfront payments compared with global peers, with total deal sizes 40% to 50% smaller. Hansoh Pharmaceutical's B7-H3 ADC, for example, was 90% less expensive than Daiichi Sankyo's comparable phase 2 B7-H3 asset when Hansoh out-licensed to GSK for $185m upfront versus Merck's $1bn+ upfront payment to Daiichi Sankyo.

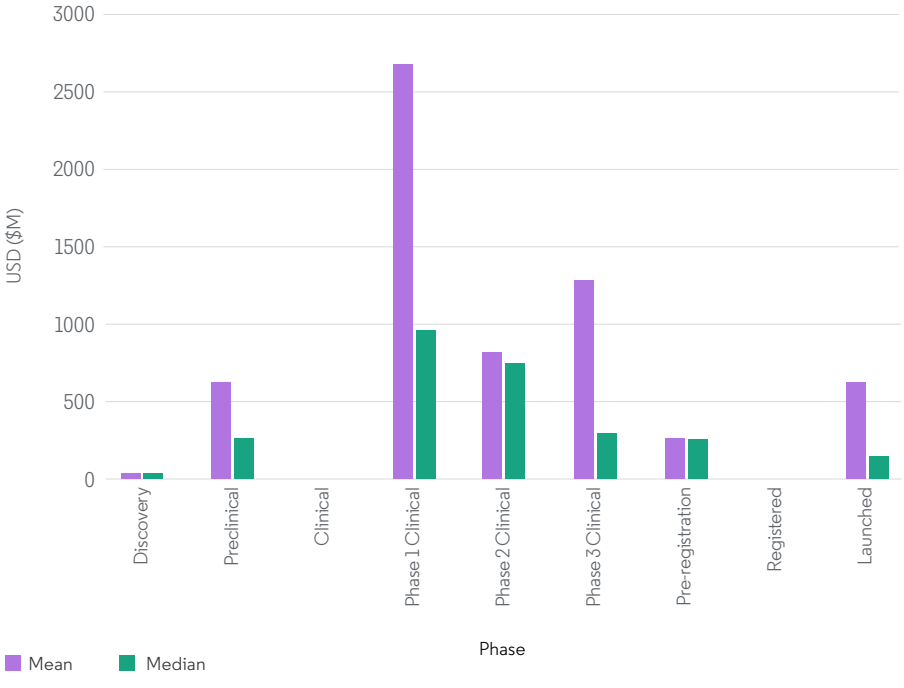
Mega-deals reshape partnership models

Eli Lilly and Co's $8.9bn agreement with Shanghai-based Innovent Biologics in early 2026 exemplifies a new strategic division of labor. Innovent Biologics will lead early-stage development through phase 2 in Mainland China, leveraging its antibody platforms and clinical execution capabilities, while Eli Lilly and Co gains exclusive rights to develop and commercialize programs outside greater China. Innovent Biologics received $350m upfront and is eligible for up to $8.9bn in milestones plus tiered royalties. The partnership builds on Eli Lilly and Co's 2020 out-licensing of Innovent Biologics' PD-1 inhibitor TYVYT® (sintilimab) for up to $1.03bn — the first Mainland China-originated immunotherapy positioned for global development under a top-tier multinational partner.

Bristol Myers Squibb's deal with Jiangsu-based Hengrui Pharma announced in May 2026 and worth up to $15.2bn advances 13 early-stage programs across oncology, hematology and immunology, with Bristol Myers Squibb paying $950m including a $600m upfront (Carey, 2026i). The partnership includes four oncology/hematology assets from Hengrui Pharma, four immunology assets from Bristol Myers Squibb and five jointly discovered and developed programs. Hengrui Pharma holds exclusive rights in Mainland China, Hong Kong and Macau, while Bristol Myers Squibb controls rest-of-world rights. Hengrui Pharma is responsible for early clinical development and has options to co-develop certain assets and conduct global commercialization alongside Bristol Myers Squibb.

Hengrui Pharma continues to be one of the most active sellers in Mainland China (Figure 12).

Figure 12: Hengrui Pharma's deal values across phases



Source: Cortellis Deals Intelligence

Worth up to $5.3bn including a $1.2bn upfront, AstraZeneca's June 2025 deal with CSPC Pharmaceuticals, located in Hebei Province, secures exclusive global rights outside Mainland China to eight programs built on CSPC Pharmaceuticals' AI-driven peptide discovery platform and proprietary Liquidgel once-monthly dosing technology. The collaboration targets obesity and type 2 diabetes, with AstraZeneca gaining access to clinical-stage GLP-1R/GIPR agonist SYH-2082 and three preclinical programs. This agreement builds on existing strategic collaborations between AstraZeneca and CSPC.

AstraZeneca also established a global strategic collaboration with Harbour BioMed (up to $4.6bn) to discover and develop next-generation multi-specific antibodies for immunology, oncology and beyond using Harbour BioMed's proprietary Harbour Mice® fully human antibody technology platform (BioWorld, 2025a). AstraZeneca acquired 9.15% of Harbour BioMed's newly issued shares through a $105m equity investment, and Harbour BioMed will establish an innovation center in Beijing co-located with AstraZeneca to support the collaboration. This coincided with the $2.5bn investment announced by AstraZeneca in March 2025 for a new global strategic R&D center and manufacturing in Beijing (AstraZeneca, 2025).

PD-1/VEGF bispecifics and ADCs dominate deal flow

The PD-1/VEGF bispecific space gained momentum after Guangdong Province-headquartered Akeso's ivonescimab (AK-112) demonstrated superiority over Keytruda in PD-L1-positive NSCLC, leading to Akeso's $5bn out-licensing deal with Summit Therapeutics for U.S. and Canadian rights.

Since then, AbbVie entered an exclusive licensing agreement worth up to $5.6bn with RemeGen Co Ltd, located in Shandong Province, for PD-1/VEGF bispecific antibody RC-148, including $650m upfront, in January 2026. Merck in-licensed Shanghai-based LaNova Medicines' PD-1/VEGF bispecific LM-299 for $588m upfront and up to $2.7bn in milestones in November 2024. Pfizer paid $1.25bn upfront for Shanghai-based 3Sbio's SSGJ-707, a PD-1/VEGF bispecific recently cleared for phase 3 in Mainland China for lung cancer as potential first-line monotherapy.

Regarding the hot area of ADCs, Merck in-licensed Kelun Biotech's TROP2 ADC sacituzumab tirumotecan (SKB-264) plus six other ADC candidates for $175m upfront and up to $9.3bn total in late 2022. Kelun's sac-TMT became the first China-made TROP2 ADC to gain local approval for advanced breast cancer (November 2024) and lung cancer (March 2025). In addition, GSK in-licensed Hansoh Pharma's B7-H3 ADC for $185m upfront and up to $1.7bn total, while IDEAYA Biosciences licensed DLL3-targeting ADC from Hengrui Pharma for $75m upfront and up to $1.05bn total.

Big pharma's AI pivot and implications for biotech

Tech giants become strategic partners

The first months of 2026 have seen major pharmaceutical companies pivot toward partnerships with big tech AI leaders. Most notably, Novo Nordisk announced a strategic partnership with OpenAI in April to 'transform how medicines are discovered and delivered' (Novo Nordisk, 2026), while Eli Lilly and Co established a co-innovation AI lab with NVIDIA focused on applying machine learning to pharmaceutical industry challenges (Eli Lilly and Co, 2026). With an investment target of $1bn over the next five years, the companies aim to determine how AI can be used to inform drug discovery, clinical development, manufacturing and commercial operations, expanding on Eli Lilly and Co's previously announced AI supercomputer for identifying, optimizing and validating new molecules. Merck also signed a $1bn deal with Google Cloud to build an 'intelligent agentic ecosystem' supporting its enterprise AI transformation across R&D, manufacturing, commercial and corporate functions (Merck, 2026).

Hedging bets across the AI landscape

At the same time, big pharma continues to diversify its AI portfolios by partnering with niche AI discovery firms. For example, in March 2026, Eli Lilly and Co expanded its multibillion-dollar collaboration with Insilico Medicine for AI-driven drug discovery. With $115m upfront plus milestone payments worth $2.75bn, Insilico Medicine is providing Eli Lilly and Co access to its AI platform to develop and commercialize multiple candidates, for which Lilly would have global rights (Sami, 2026b).

Insilico Medicine also benefits from becoming part of the Lilly Gateway Labs in Shanghai, an entry point into the Chinese market. In January 2026, Eli Lilly and Co also entered a collaboration with Chai Discovery to accelerate biologics discovery for multiple targets using a purpose-built AI model on Chai Discovery's AI platform (Chai Discovery, 2026).

Despite high-dollar investments in AI drug discovery like Eli Lilly and Co's, no AI-discovered drug has received regulatory approval yet. Insilico Medicine's rentosertib (ISM001-055) for idiopathic pulmonary fibrosis treatment represents the furthest progress, with phase 3 trials for the oral formulation expected in the second half of 2026.

This lack of precedent creates regulatory uncertainty. It remains unclear whether regulators will require additional transparency into AI algorithms, training data provenance or novel validation studies, potentially impacting approval timelines for the billions invested in these partnerships.

Reimagining the biotech intermediary

These developments also raise a fundamental question about the traditional biotech business model. Historically, big pharma has relied on biotech startups as part of their innovation engine. However, if promising targets and molecular candidates can be discovered directly using AI platforms, the role of biotech as an intermediary may diminish, with big pharma taking potential targets directly to academic collaborators to initiate research programs.

If traditional acquisition and licensing pathways narrow as big pharma develops direct AI capabilities, biotechs may need to advance further toward commercialization independently, a shift that would demand significantly more capital and potentially strain venture funding models built around earlier-stage exits.

If promising targets and molecular candidates can be discovered directly using AI platforms, the role of biotech as an intermediary may diminish, with big pharma taking potential targets directly to academic collaborators to initiate research programs.

Global research landscape shifts as U.S. policy uncertainty continues

2025's funding crisis yields 2026's structural shifts

As discussed in the 2025 Clarivate deals report, government funding has historically been the critical early-stage investor in pharmaceutical innovation, with National Institutes of Health (NIH) funding contributing to 99.4% of FDA-approved drugs from 2010 to 2019, of which 24.2% (86/356) were first-to-target (Galkina Cleary et al, 2023). Although NIH funding for fiscal year 2026 was recently restored, the widespread grant cancellations in 2025 triggered a 'brain drain' from the U.S. and prompted Europe to recruit U.S. researchers through expanded funding programs.

With ongoing proposals to cut NIH funding again in the fiscal year 2027 budget (KFF, 2026), these shifts could permanently reshape where future innovations will emerge and which nations will lead the next generation of therapeutic breakthroughs. 2026 brings the first tangible signs of what those disruptions mean for the research ecosystem that feeds pharmaceutical development.

Immigration policy compounds funding disruption

The source of the impact on academic research extends beyond funding cuts. Recent STAT survey data revealed that immigration policy changes and visa processing delays have created additional barriers to attracting and retaining scientific talent (Joseph, 2026). In this survey of nearly 1,000 U.S. researchers supported by the NIH, '14% of respondents reported that changes in immigration policies had forced scientists, students and postdocs to turn down offers to work in their labs, and 13% said their labs had lost researchers to other countries as a result of NIH funding changes.'

The annual Open Doors report from the Institute on International Education similarly described a 12% decrease in graduate student enrollment at U.S. academic institutions in the 2025-2026 academic year, the first annual drop following steady growth after the pandemic (ACE, 2025). The visa application process, including delays and denials, was the primary reason for declining international study enrollment reported by 96% of the institutions. This was followed by travel restrictions to the U.S. (68%), students being worried about feeling unwelcome (67%) and 'the broader sociopolitical environment' (64%).

Postdoctoral researchers and international graduate students have historically contributed significantly to the work in academic laboratories that generate the basic and applied research underlying future drug targets. Empty laboratory positions could mean slower research progress or entire lines of investigation stalled or abandoned.

Europe and Canada capitalize on U.S. instability

As the U.S. government continues to call for cuts in research funding, other countries and regions are further committing to funding for international researchers. The European Research Council (ERC) funding increases as part of the 'Choose Europe' campaign noted in last year's report have been renewed for a second year (European Commission, 2025). As part of this initiative, the Marie Skłodowska-Curie Actions opened a €105.5m COFUND call in December 2025 specifically designed to absorb displaced researchers and strengthen European doctoral and postdoctoral programs (Marie Skłodowska-Curie Actions, 2025). Canada also announced a $1.7bn investment in research funding in December 2025 (Government of Canada, 2025), with the newly announced Global Impact+ Research Talent Initiative comprising a suite of programs that aim to attract leading international researchers to Canada.

These investments are already bearing fruit. The ERC Starting Grants 2026 competition received a record number of applications, representing a 22.4% increase from the previous year (European Research Council, 2025). Of the 246 applications from non-European researchers, 69% were from the United States, a jump of almost three times from the previous year's U.S. applicants (Athena European University, 2025). This number contributes to the doubling of U.S. researchers applying to grants in European institutions overall (Gibney, 2026).

As the U.S. government continues to call for cuts in research funding, other countries and regions are further committing to funding for international researchers.

Implications for pharma and biotech partnerships

These patterns raise important questions for the pharmaceutical and biotech industries. U.S.-based biotech startups have traditionally benefited from proximity to academic hubs, enabling informal collaborations, easier recruitment of postdocs and graduate students, and streamlined technology transfer. If research talent and activity disperse geographically, these proximity advantages may diminish, potentially affecting the formation and early development of new ventures. Additionally, scientific networks and collaboration patterns could evolve as researchers relocate.

The question facing the industry is whether these trends represent a temporary disruption or the beginning of a more fundamental realignment in the global research ecosystem, one in which biotech may no longer 'speak with an American accent.'

Key takeaways

For biotechs:

As pharma consolidates spending into fewer, higher-value partnerships and expands sourcing beyond traditional Western hubs, biotechs must adapt their development timelines, value propositions and competitive positioning to remain attractive in an increasingly selective market.

- **Differentiation is crucial to driving premium valuations.** With mega-deals concentrated in therapeutic areas like GLP-1 RAs, ADCs and PD-1 combinations, biotechs must demonstrate clear competitive advantages to attract pharma interest. Whether through novel mechanisms of action, superior clinical data, proprietary platform technologies or best-in-class potential, standing out in saturated markets is essential.

- **Demonstrate global data credibility and transferability.** Biotechs must show their clinical data meets international regulatory standards and can support multinational development strategies. Your evidence package should address how it will satisfy FDA, EMA and other major regulators simultaneously.

- **Consider building commercialization capabilities.** With pharma increasingly partnering directly with AI tech giants and consolidating spend into fewer mega-deals, traditional exit pathways may narrow for many biotechs. Companies with strong assets but limited partnership prospects should evaluate whether building toward independent commercialization creates better value.

Key takeaways

For pharmas:

The convergence of geographic innovation shifts, AI transformation and evolving research ecosystems demands that pharmaceutical companies fundamentally rethink where they source innovation, how they structure partnerships and what capabilities they build internally versus access externally.

- **Align deal structures with portfolio priorities.** Although the largest transactions of 2025-2026 involved multi-program platform collaborations offering pipeline depth and optionality, single-asset deals may better serve specific portfolio gaps or therapeutic priorities. Assess whether your pipeline needs are better addressed through broad platform access with multiple shots on goal or targeted acquisitions of validated assets that fill immediate commercial or clinical voids.

- **Pursue strategic AI partnerships to find the right fit.** With AI's drug discovery value still being proven, diverse approaches are being pursued: some partnering with tech giants for foundational infrastructure, others licensing specialized biotech AI platforms for targeted applications. Maintaining flexibility with partnership models could enable you to pivot to what actually accelerates development timelines and success rates.

- **Expand geographic sourcing strategies.** Innovation increasingly originates from diverse global hubs beyond traditional U.S. biotech centers. Successful dealmaking requires broader scouting operations, relationships across multiple geographies and frameworks for evaluating innovation regardless of origin, while maintaining awareness of regional regulatory and development pathway differences.

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