VERDANT RESEARCH

Pharmaceutical Innovation and the Inflation Reduction Act: 2026 Mid-Year Review

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Overview

We follow 19 biopharma companies that have had or are likely to have a drug selected for Medicare negotiation as a result of the Inflation Reduction Act (IRA) of 2022. In the four years since IRA's passage, investors' focus on drug price negotiation and Part D reform has fluctuated. The topic currently receives relatively little airtime on earnings calls, even as it continues to influence investment and pricing decisions.

The first half of 2026 showed an industry less distracted by external factors, after last year's flurry of macro-level developments (e.g., Most Favored Nation agreements and uncertainty, tariff threats, health-related funding cuts, and instability at top federal health agencies). The focus has now shifted to pipeline and launch execution as companies begin to navigate several important losses of exclusivity (LOE).

Companies and investors displayed optimism around the current innovation cycle—the fruits of which are urgently needed to offset impending patent expirations. We see signs that the IRA is influencing innovation, including the prioritization and acceleration of novel and differentiated pipeline assets with characteristics that make them more attractive in a post-IRA world. Investors are following launches and clinical readouts from multiple programs and anticipating more in the next six to 12 months, including both novel mechanisms and next-generation iterations of products losing exclusivity.

That said, disappointing results from a few high-visibility pipeline candidates serve as a reminder that drug development carries intrinsic risk, and not all late-stage candidates will succeed in the clinic.

COMPANIES AND INVESTORS DISPLAYED OPTIMISM AROUND CURRENT INNOVATION CYCLE.



KEY FINDINGS

1 Throughout the first half of 2026, companies were focused on the progress of newly launched products, upcoming clinical readouts, and other pipeline milestones as many policy and macro-level issues had been resolved by January 2026. In earnings calls, we heard a handful of questions about Most Favored Nation (MFN) agreements, TrumpRx and CMS' BRIDGE program, with MFN receiving the most attention, mainly regarding how foreign governments will respond to pressure to raise drug prices.

2 Some companies are starting to face long-anticipated losses of exclusivity while others are still bracing for the brunt of their patent cliff. A few are beginning to see offsetting revenue from recently launched or newly acquired products, and several have begun showcasing the contribution of their younger "growth portfolios".

3 R&D investment in the first half was significantly higher than in the same period last year but remained targeted and disciplined, driven by late-stage trials and a low 1H25 comparison base of spending. Many companies communicated plans to continue investing robustly in the ongoing new product cycle and are doubling down within their areas of therapeutic concentration. The highest priority programs are being accelerated through development, with a few even being called out as among the largest R&D commitments in their manufacturers' histories.

4 This year marks an inflection point for several innovative pipeline programs that companies have been prioritizing and accelerating in recent years. There have already been some pivotal clinical readouts in the first half, with more anticipated in the next six to 12 months. Some of the most exciting results have been in oncology. As expected in drug development, a few high risk/high reward bets had disappointing results. As clinical profiles emerge in highly competitive areas like obesity and immunology, they serve as benchmarks that R&D decisionmakers use to evaluate internal and external pipeline candidates. Given the high bar being set by new products and late-stage candidates, we have seen elevated attrition in both areas, with several pipeline products being discontinued and licensing activity in obesity slowing down meaningfully this quarter.

5 We continue to see little evidence that the industry is pulling away from the development of small molecules. Several small molecules are among the industry's top priority launches and pipeline programs.

6 Licensing deals and development collaborations with Chinese companies continue to evolve in complexity, breadth, and intensity of collaboration. Over the last two years, we saw an upgrade in target assets and modalities, as well as in the objectives of the partnerships. There is more recognition that Chinese companies aspire to be global biopharma players in their own right, with some recent deals (Revolution Medicines/ BeOne and Bristol Myers Squibb/ Hengrui) reflecting the Chinese counterparts' progress towards this objective.

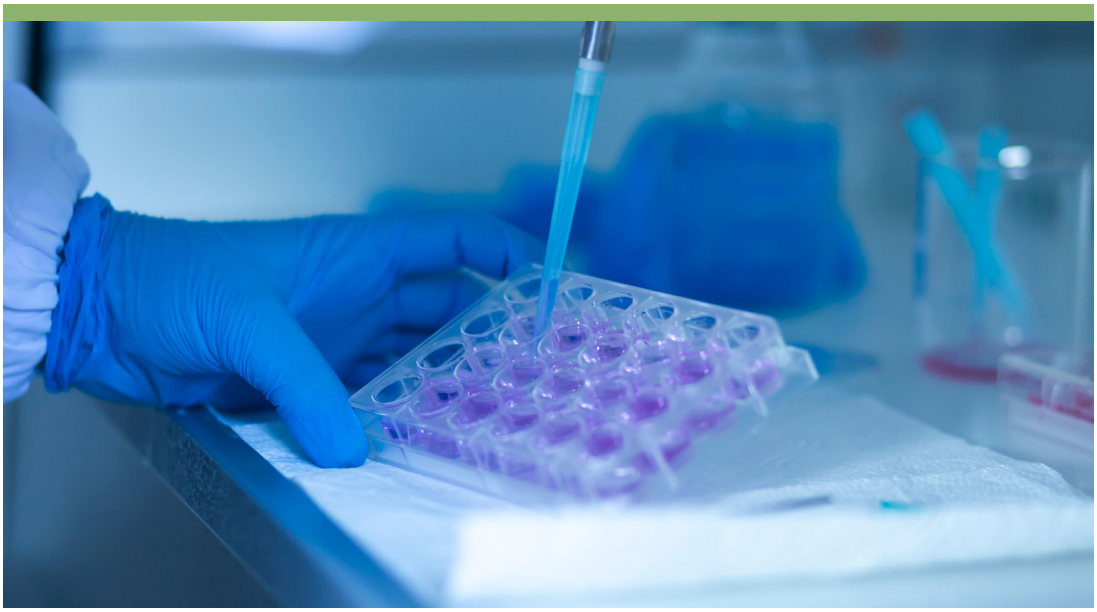
7 Meanwhile, many legacy products continue to perform well even as they near LOE. Eliquis, Jardiance, Xtandi, and Farxiga grew robustly, helped by lower list prices and by higher volumes resulting from out-of-pocket caps in Medicare Part D. This points to an emerging role for direct-to-patient channels in potentially keeping patients on branded versions of blockbuster drugs even after generic competition.

+10%

INCREASE IN PIPELINE PROGRAMS SINCE 2023, WITH QUALITATIVE UPGRADES BASED ON COMPANY PRIORITIES

13%

R&D GROWTH IN THE FIRST HALF OF 2026



Regulatory, Economic and Policy Developments

In our 2025 year-end report, we noted growing optimism that the biopharma industry was in the early stages of a longer-term recovery fueled by a strong product cycle, fewer macro-level headwinds, and a better funding environment due to declining interest rates.

After gains of more than 20% in 4Q25, the XBI biotech index continued its strong performance, rising 30% in 1H26. The DRG large-cap pharma index also appreciated over 8% but has modestly underperformed the tech-driven S&P 500. The pickup in M&A and attention to near-term clinical data releases have helped fuel the comeback for the biotech sector, which lagged for several years. Because biotech stocks are more sensitive to interest rates, rate volatility is a factor to watch throughout the rest of the year. Mega-cap technology and large-cap pharma stocks have tended to move in opposite directions, so biopharma indices can act as a safe-haven when investors rotate out of big tech (and vice versa). For example, the market pullback in AI infrastructure shares freed up capital that could be invested in biotech and pharma stocks in late 2025 and mid-2026 – contributing to strong gains during this period.

TIMELINE:
PRESCRIPTION DRUG POLICY EVENTS THROUGH Q2 2026

APRIL 2025

- EO "Lowering Drug Prices by Once Again Putting Americans first"

MAY

- EO "Regulatory Relief to Promote Domestic Production of Critical Medicines"

JULY

- HR1 One Big Beautiful Bill Act signed into law
- EU trade deal placing 15% tariff on pharmaceutical imports
- Trump sent letters to 17 pharmaceutical manufacturers to lower drug prices

SEPTEMBER

- Trump announced 100% tariff on branded drug imports unless they commit to building manufacturing facilities in the US

OCTOBER

- TrumpRx.gov announced
- Effectuation of 100% tariff did not materialize

DECEMBER

- MFN deals signed by 14 companies; additional 2 signed in Jan
- CMS proposed GLOBE and GUARD incorporating international price benchmarks to Medicare

APRIL 2026

- Administration announced new Section 232 tariff on branded drugs without MFN deal

MAY

- Council of Economic Advisors estimate MFN will save $529B over 10 years

IRA-SPECIFIC COMMENTARY AND UPDATES

In mid-June, CMS proposed changing its treatment of certain fixed-dose combination drugs so that reformulations of biologics with hyaluronidase would be considered a single product for negotiation. CMS is expected to finalize its rule this fall. If finalized, this would mark the most significant change to the Medicare Drug Price Negotiation Program (MDPNP) since the expansion of the orphan drug exemption that was included in the One Big Beautiful Bill Act (OBBBA).

Manufacturers have long viewed reformulation as an important strategy for life cycle management of key franchises. Until now, it has also been considered a defensive tactic against MDPNP, because CMS has treated different combinations of active ingredients as distinct products for purposes of negotiation. Several blockbuster drugs including Keytruda, Opdivo, and Ocrevus have recently launched subcutaneous versions containing hyaluronidase, which could limit the revenue impact if the original products are selected for negotiation under the current approach.

The different negotiation timelines for small molecules and biologics (the "pill penalty" or "biologics bonus") have received relatively little attention in recent months, but Lilly has disclosed its intention to file its next generation obesity drug retatrutide as a BLA—a position the FDA is challenging. Approval as a BLA would confer 12 years of marketing exclusivity and 13 years before a negotiated price could take effect, versus the shorter timelines for an NDA-approved drug.



UPDATES ON DRUGS SELECTED FOR NEGOTIATION

IPAY 2026 drugs Entresto, Stelara, and Xarelto will be removed from the MDPNP program starting January 1, 2027, as they now face generic or biosimilar competitors. They will, however, remain subject to the Maximum Fair Price (MFP) throughout the remainder of 2026. Effective January 1, 2029, Xeljanz (IPAY 2028) will be removed. Because MDPNP selects drugs late in their lifecycles, more products could be deselected in the future given the uncertain timing for the entry of generic competitors.

Additional IRA-related dynamics are also driving higher revenues of certain selected products. The inflation penalties associated with IRA and Medicaid have prompted some manufacturers to lower certain list prices as of January 1, 2026, including for Eliquis, Jardiance, Farxiga, Linzess, Imbruvica, Fiasp, Xtandi and Januvia/ Janumet—all of which will have had MFPs effective by 2027. This benefits patients and can also boost manufacturers' revenues by removing the inflation penalty (as is the case for Eliquis). Boehringer Ingelheim's (BI) financial release noted that "the positive development of Jardiance was supported by a large and growing patient base, as well as changes in the U.S. pricing and reimbursement environment, which drove significant volume growth." Increased utilization due to out-of-pocket spending caps and lower list prices are also contributing to greater than expected spending and premium growth in Medicare Part D.

INTERNATIONAL DYNAMICS FOLLOWING MFN AGREEMENTS

On earnings calls over the past two quarters, investors seemed to have largely moved on from concerns about MFN, reflecting a general belief that the arrangements are unlikely to have any material near-term impact on the companies that signed. European pricing also received less airtime than last quarter but remains a priority for the industry and the U.S. government. Specifically, the Trump administration is seeking to use a Section 301 investigation against Germany over alleged "persistent underpayment for innovative pharmaceutical products". There have been reports that the U.S. is also considering similar investigations against France and other EU countries.

As noted in our previous reports, Europe-based companies have been more outspoken in their criticism of the European pricing environment than their U.S. peers. In its mid-year release, Germany-based Boehringer Ingelheim's Head of the Human Pharma Business Unit, Shashank Deshpande, stated:

> ...In an era of accelerated medical discovery, where the boundaries of what is possible are continuously expanding, innovation-friendly environments such as the United States play a critical role in ensuring new therapies reach patients more rapidly.

Relatedly, BI is "...engaging with governments around the globe to create an environment that appropriately recognizes the value of innovative medicines and ensures patient access." AstraZeneca acknowledged on its call that its pricing strategy has evolved in response to MFN, and that its engagement with payers in high-income countries reflects this new reality. It is possible the decreased discussion on calls may reflect progress in negotiations with governments and payers rather than diminished interest in the topic.



FROM TARIFF RISK TO NEW PRODUCT CYCLE

Removal of the MFN overhang allowed biopharma to focus on a new phase of investment and growth

Furthermore, BI and Eli Lilly recently disclosed plans to scale back investment in Germany by at least $1 billion apiece because the country's new cost-containment measures are expected to drive deeper discounts on branded drugs. This follows a precedent set with the U.K., in which the U.S. administration engaged in government-level negotiations (including tariff threats) while companies like Lilly, AstraZeneca, and Merck also curtailed investment in the country. The U.K. subsequently reached an agreement with the U.S. to increase the amount it spends on medicines and modify its rebate scheme.

Finally, there is growing concern that MFN's launch price parity requirement will delay the introduction of new drugs in countries that serve as MFN reference markets. Several companies (particularly those based in Europe) addressed this possibility directly in their Q1 calls, though discussion was more muted during the mid-year calls. In recent months, we saw more reliance on trade groups to make this argument and increase pressure on other countries to raise drug prices.

FDA LEADERSHIP

Leadership disruptions and vacancies persist, but concerns about politicized decision-making seem to be easing. FDA Commissioner Marty Makary resigned in May after a tumultuous year in the role, leaving a void at the top of the agency as well as at both CDER and CBER. In addition to departures of senior regulators and scientists (some of which pre-dated Makary's appointment), the reduced predictability around regulatory processes had been a source of concern for the industry, particularly following decisions related to certain gene therapies and vaccines from Sarepta, UniQure and Moderna.



FDA LEADERSHIP DISRUPTIONS AND VACANCIES PERSIST, BUT CONCERNS ABOUT POLITICIZED DECISION-MAKING SEEM TO BE EASING.

The departures of Makary and Vinay Prasad, as well as the early actions by acting commissioner Kyle Diamantas, seem to have quelled some of these concerns. For example, there have been reversals of some of the agency's controversial decisions (e.g, complete response letters and refusals to review certain products).

HHS and FDA have outlined reforms aimed at modernizing clinical research and speeding the process for first-in-human clinical trials, i.e., "Project TrialBlazer". While Makary had also championed some early efforts in this area, the pilot program provides a roadmap for accelerating early clinical development. The initiative was prompted by recognition that many early-stage trials have been moving to China and Australia. The hope is that AI and other advanced technologies will help reduce the heavy administrative burden in this phase of development.

In addition to this "offensive" response to Chinese competition, Congress and the administration (through the Treasury Department) are considering protectionist legislation (such as the Biotech Investment National Security Act, BINSA) that could limit investment in and dealmaking with Chinese entities. These bipartisan efforts gained momentum over the summer and bear watching since China-based assets have been such a significant source of pipeline expansion in recent years. (More on our blog post "From Fast Follower to Innovation Partner: The Evolution of Dealmaking Between Global Biopharma and Chinese Companies".)

TRUMPRX AND DIRECT-TO-PATIENT SALES PLATFORMS

The administration continues to tout TrumpRx, and recently credited it and MFN models for lowering inflation (down 3% in July) on prescription drugs. However, TrumpRx has rarely been discussed on quarterly calls since its announcement in October. Most investors expect the platform will have minimal financial impact on companies and limited benefit to patients. In reality, the availability of generic and biosimilar versions of top-selling drugs, along with price reductions in response to Medicare and Medicaid inflation rebates, MDPNP, and Part D reform, are likely larger contributors to lower drug price inflation.

That said, direct-to-patient (or direct-to-consumer) sales remain an evolving theme, particularly for cash-pay, consumer-driven categories like obesity. Novo Nordisk and Lilly are relying heavily on these platforms (TrumpRx and their own) to launch the Wegovy pill and Foundayo. Last quarter, Novo management disclosed that over 50% of U.S. sales for its anti-obesity drugs are transacted through its NovoCare pharmacy and other direct channels. Direct-to-patient platforms may gain appeal to manufacturers if they are able to improve retention of patients on branded drugs after generics or biosimilars become available. Lowering prices and engaging directly with patients before LOEs may create opportunities to build brand loyalty, even when formulary coverage declines.



Company And Portfolio-Level Developments

R&D SPENDING

Research and development expenditures in the first half grew at a very robust 13% year-over-year (YOY) on a normalized basis, compared with a 3% decline in 1H25 and 5% growth for full-year 2025. The increase was driven largely by heavy investment in late-stage pipeline programs and a low base from restrained spending in 1H25. Several companies also included impairment or in-process R&D (IPR&D) charges. (Companies record impairment charges when a program is discontinued or its expected future cash flows are significantly reduced; IPR&D relates to unfinished developmental R&D programs obtained in acquisitions.) This quarter is the first time since we began tracking R&D expenses that none of our 19 companies reported a YOY decline.

Merck, GSK, Novo, and Biogen reported the largest increases in R&D expenses, though each was inflated by these non-recurring charges. On a normalized basis, Lilly posted the largest increase at 20.7%. Johnson & Johnson's (J&J) R&D expense rose just 6.5%. Management attributed the lighter spending to "R&D phasing", likely reflecting lower spending on the large phase 3 program supporting Icotyde (which has now launched).

Discipline remained high despite the increase, with prospective investments held to a high internal bar based on explicit metrics. Pipeline candidates are regularly reviewed, and discontinuations of less competitive assets seem more normalized than in the past. Many of our companies signaled that R&D growth will continue or accelerate in the second half of 2026 as pivotal programs for key assets advance. Several late-stage programs have been called out as among the largest R&D commitments in their manufacturers' histories, including Lilly's obesity programs (triple agonist retatrutide and the amylin agonist eloralintide); Amgen's long-acting GLP-1 Maritide; and Merck's recently approved oral PCSK9 Lipfendra (enlicitide).

REVENUES AND SALES GROWTH

Revenues were stronger in Q2 than Q1, with most companies affirming or modestly raising financial guidance for the year. The average revenue growth for the 18 reporting companies was 10% and all recorded increases for the quarter, including Novartis, Roche and Novo, which had reported revenue declines in Q1.[1] Eli Lilly led the pack with 51% revenue growth fueled by tirzepatide (Zepbound and Mounjaro), which is now annualizing at over $55bn. Other strong performers were Novo (21%) and Sanofi (18%). In some cases, growth was driven by stronger-than-expected performance of aging blockbusters, such as Eliquis (BMS), Dupixent (Sanofi and Regeneron) and Farxiga (AstraZeneca)—raising the bar for revenues that need to be replaced post-LOE.

We previously noted that many companies on our watchlist were already preparing for a patent cliff when the IRA became law in 2022. Four years later, exclusivity losses are weighing on revenue growth for some, though different companies are at different stages of the cycle. J&J is past the trough as Icotyde is off to a strong start and Tremfya continues to grow as Stelara's successor more than a year after the entry of biosimilars. And even as Novartis works through the expirations of Entresto, Promacta and Tasigna, it managed to eke out 1% growth in Q2. AstraZeneca expects Farxiga's LOE to weigh on 2H sales but still forecasts overall sales to increase at a single-digit pace, as the rest of its portfolio is growing 11%.

As new products begin to contribute meaningfully to top-line growth, some companies highlighted this by presenting two separate growth rates: with and without the slowing or declining legacy products. The quality of the revenue growth varied by company, depending on whether the source of upside came from legacy products or the newer portfolio of future growth drivers. Bristol-Myers Squibb touted an increase of 15% in its growth portfolio compared with a 4% decline in its legacy products. J&J emphasized that its quarterly pharmaceuticals sales grew by double-digits excluding Stelara vs 5.6% when it's included. Biogen, which has very deliberately diversified its product base beyond its historical concentration on multiple sclerosis (MS), highlighted that its "growth portfolio" grew 24% and generated sales that exceeded those of its legacy MS portfolio.

[1.] *Excluding BI, a privately held company which doesn't report quarterly financials*

COMPANY	PRODUCTS	USA PATENT EXPIRATION YEARS	SHARE OF DRUG SALES
Novo Nordisk	Ozempic, Wegovy	2032	80%
Bristol Myers Squibb	Opdivo, Orencia SC, Eliquis, Pomalyst, Yervoy	2025, 2026, 2028	64%
Merck & Co	Keytruda, Bridion	2026, 2028	59%
Boehringer Ingelheim	Jardiance, Ofev	2025, 2028	56%*
Astellas Pharma	Xtandi	2027	51%
GSK	Shingrix, Tivicay, Dovato, Trelegy, Ellipta, Benlysta	2025, 2027, 2028, 2029	42%
Amgen	Repatha, Krystexxa, Blincyto, Prolia, Xgeva, Otezla	2025, 2028, 2030	39%
J&J	Erleada, Darzalex, Opsumit, Xarelto	2025, 2029, 2030	38%
Roche	Ocrevus, Xolair, Perjeta	2025, 2029	36%
Novartis	Cosentyx SC, Promacta, Entresto, Tasigna	2025, 2027, 2029	35%
Takeda	Entyvio	2032	29%
AstraZeneca	Tagrisso, Farxiga, Lynparza	2027, 2030, 2032	26%
Pfizer	Vyndaqel, Ibrance	2027, 2028	18%
AbbVie	Vraylar, Imbruvica	2026, 2029	12%
Eli Lilly	Taltz, Trulicity	2027, 2030	12%

TABLE 1.
SHARE OF COMPANIES' 2025 U.S. DRUG SALES FOR KEY PRODUCTS WITH AN EXPECTED PATENT EXPIRATION BETWEEN 2025 AND 2032

**Share of global sales as BI doesn't disclose geographic sales*

R&D STRATEGY AND STRUCTURE

The mandate to replace aging revenue with new products is a key priority for company leadership. New CEOs at the helm at Sanofi, GSK, Novo and Takeda are bringing in some additional shifts in R&D strategy. Though the reasons for the subsequent restructurings are different, both Sanofi and Novo are driven by the need to diversify heavily concentrated revenue bases.

Belen Garijo, who took the post of Sanofi CEO on April 29, has conducted a deep review of the pipeline and pruned more assets this quarter. Along with the new R&D head, she is executing an accelerated transformation roadmap that focuses on the need for R&D and pipeline improvements centered around the "strongest science, the highest unmet medical need and where we can create long-term sustainable value…". Several high-profile failures of previously prioritized immunology programs likely contributed to the departures of incumbent executives.

Novo's CEO transition took place in mid-2025, but the company faces some challenges similar to Sanofi as it seeks to grow and diversify future revenues beyond its semaglutide franchise (obesity and diabetes), which makes up 75% of sales. Meanwhile, GSK's Luke Miels took the reins in January and used the mid-year earnings call to lay out his new "Accelerate Growth" program, which emphasizes cost-cutting, productivity improvements and pipeline selectivity. Following a pipeline review, GSK has prioritized seven late-stage assets across 18 indications based on the potential to maximize benefit to patients and commercial value. The current mandate is to more than double the number of phase 2 and 3 assets with blockbuster potential and move these candidates through development more quickly. In addition to simplifying and accelerating R&D, GSK plans to place more emphasis on leveraging external innovation, reallocating most of its £1.9bn in annual cost savings to strengthen the pipeline.

PIPELINE PROGRESS AND EMERGING NEW PRODUCTS

This year is pivotal for many of the prioritized pipeline products we have been following. Some assets are starting to release clinical data while others have recently been approved or launched: the first oral GLP-1s for obesity, Novo's Wegovy pill and Lilly's Foundayo; Merck's Lipfendra, its oral PCSK9 for high cholesterol which was approved only 24 days after its NDA submission under the Commissioner's Priority Review pathway; and J&J's oral IL-23 inhibitor Icotyde for psoriasis, which further strengthens its post-Stelara immunology portfolio. On its earnings call, Takeda highlighted its launch preparations for its narcolepsy drug Orzeyful, potentially opening up a new mechanism for treating sleep disorders.



2026 TO EARLY 2027 REPRESENTS A PIVOTAL PERIOD FOR MANY OF THE PRIORITIZED PRODUCTS OUR COMPANIES HAVE BEEN HIGHLIGHTING

In addition to these newly approved agents, companies are preparing for key regulatory or clinical milestones for other innovative developmental programs. Within obesity, Amgen and Pfizer will unveil important clinical data for their long-acting agents, Maritide and the Metsera ultra-long-acting GLP-1, respectively; Lilly has reported positive phase 3 results for its triple agonist retatrutide, with plans to file in 1Q27; and BI plans to file survodutide in 4Q26.

A new high profile cardiovascular target is lipoprotein(a), for which Novartis, Amgen and Lilly are all developing drugs. Lipoprotein(a) is considered a significant risk factor for cardiovascular disease, and the companies have been hoping to show both significant reductions in the biomarker and cardiovascular events such as heart attack and stroke. (Novartis recently disclosed phase 3 results showing that pelacarsen failed to deliver the hoped-for reduction in CV events, underscoring the high-risk/ high-reward tradeoff of pursuing unvalidated targets.)

Despite the appetite for higher risk and more disruption, there is no denying that the herd mentality persists within the industry. We still see multiple companies developing drugs for the same targets, especially in disease areas with large addressable patient populations. Many of these were acquired or developed in parallel and will have pivotal readouts and decisions around the same time. Additional examples beyond those described above include TL1A inhibitors for immune disorders (Merck and Pfizer), PD1xVEGF bispecific antibodies in lung cancer and Factor XI inhibitors for atrial fibrillation and stroke reduction. Regarding the latter, BMS and J&J are pursuing milvexian as a follow-on product for Eliquis and Xarelto, as these companies can leverage existing commercial and scientific infrastructure and expertise to encourage "product hopping" prior to the key patent expirations.

INVESTMENTS IN TECHNOLOGY AND AI

Investment in and optimism around AI are strong, with Lilly, Pfizer, AstraZeneca and Amgen among those highlighting recent developments and progress integrating new technologies into their R&D organizations. Several companies are touting ways that AI can help drive an overall improvement in R&D productivity, with some claiming they are already seeing benefits.

ELI LILLY	Announced a far-reaching partnership in January with Nvidia to **invest up to $1 billion** over five years to create a joint AI co-innovation lab for drug discovery.
PFIZER	Aims to **"build an end-to-end AI-native R&D organization"**. Sees a "structural transformation opportunity to improve R&D output, productivity, and competitive position".
ASTRAZENECA	**Claims AI is already improving its probability of success**, including identifying patient populations for clinical trials and target identification/ optimization
AMGEN	By combining AI, automation and biology, Amgen has **leveraged its generative biology platform to triple protein engineering** throughput and cut discovery timelines in half.

DEALMAKING

2026 has been marked by strong deal activity, reflecting improved industry sentiment and the easing of macro-level overhangs that impeded transactions for much of last year. In just six months, the group reached 83% of last year's acquisition value and 74% of its product deal value. Both the number of transactions and their combined value are approaching double the levels of 1H25.

M&A

Our companies announced 18 acquisitions with total potential value of $1bn or more in 1H26 (nine per quarter) with an aggregate value of $78.7bn. The average value of the acquisitions was $4.4bn, essentially flat against the $4.5bn full-year 2025 average; however, the median $2.35bn sits well below last year's, indicating that a small number of very large deals is driving the aggregate total. Ten of the 18 deals were in the $1bn to $3bn range and half of the deals were for preclinical or phase 1 lead assets, compared with one-third for the full year of 2025. Of the eight deals that cleared the $5bn threshold, two exceeded $10bn in potential value: AbbVie's $10.9bn acquisition of Apogee Therapeutics and GSK's $10.6bn acquisition of Nuvalent.

TABLE 2.
M&A TRANSACTIONS OF $1BN OR MORE IN TOTAL DEAL VALUE ANNOUNCED BETWEEN JANUARY AND JUNE

COMPANY/ TARGET COMPANY	KEY ASSET(S)	THERAPEUTIC AREA	SM OR BIO	TOTAL DEAL VALUE ($MN)
AbbVie/ Apogee Therapeutics	APG777 (zumilokipart)	Immunology; inflammation	BIO	10,900
GSK/ Nuvalent	zidesamtinib; neladalkib	Oncology	SM	10,600
Eli Lilly/ Centessa Pharma	ORX750 (cleminorexton)	Neuroscience	SM	7,800
Gilead/ Arcellx	Anito-cel	Oncology	BIO*	7,800
Eli Lilly/ Kelonia Therapeutics	KLN-010	Oncology	BIO*	7,000
Merck/ Terns Pharma	TERN-701	Oncology; hematology	SM	6,700
Biogen/ Apellis Pharma	Syfovre; Empaveli	Immunology	BIO	5,600
Gilead/ Tubulis	TUB-040	Oncology	BIO	5,000
Eli Lilly/ Orna Therapeutics	ORN-252	Immunology	BIO*	2,400
Eli Lilly/ Ajax Therapeutics	AJ1-11095	Oncology	SM	2,300
GSK/ Rapt Therapeutics	ozureprubart	Immunology	BIO	2,200
Gilead/ Ouro Medicines	gamgertamig (OM336)	Immunology; inflammation	BIO	2,175
Novartis/ Excellergy	EXL-111	Immunology	BIO	2,000
Eli Lilly/ Vaccine Company	EBV vaccine	Infectious disease	VACCINE	1,550
Eli Lilly/ Curevo	amezosvatein	Infectious disease	VACCINE	1,500
Eli Lilly/ Ventyx	NLRP3 inhibitor	Inflammation	SM	1,200
Biogen/ RayThera		Immunology	SM	1,000
JNJ/ Firefly Bio	Firelink platform	Oncology	BIO	1,000

**Cell therapy*
Bio: biologic molecule; Pharma: Pharmaceuticals; SM: small molecule

Eli Lilly and Gilead dominated M&A activity, accounting for 10 of the 18 transactions (Lilly with seven totaling $24bn and Gilead with three totaling $15bn). Lilly, also the most acquisitive company last year, continues to expand into new modalities and therapeutic areas such as sleep disorders (Centessa) and in-vivo CAR-T for cancers (Kelonia). Although several of the deals exceeded $1bn in potential value, the terms and upfront payments of some were undisclosed, leaving some questions about the risk and economics Lilly is taking on.

M&A continues to concentrate around oncology and immunology, which made up 15 of the 18 acquisitions including the two largest deals of this year. Lead assets for oncology deals were more heterogeneous, spanning antibody-drug conjugates (ADCs), in vivo CAR-T, targeted protein degraders and next-generation TKIs. Immunology deals clustered on antibody and T-cell-engager approaches to autoimmune and allergic disease: GSK/ Rapt (anti-IgE for food allergy), Novartis/ Excellergy (an IgE antibody positioned as a follow-on to Xolair), Gilead/ Ouro (a BCMAxCD3 T-cell engager) and AbbVie/ Apogee (an IL-13 antagonist in atopic dermatitis). In contrast to recent years (including six cardiometabolic acquisitions in 2025), there were no obesity-related transactions, as several companies focused on launches and late-stage clinical trials for cardiovascular and metabolic programs acquired over the last several years.

We saw a swing towards more deals centered on biologic lead assets, with small molecules representing 38% of deal value, below the 44% to 53% average range over the last three years. Biologics accounted for 10 of 18 acquisitions and $46.1bn in total deal value (59% of the total) against six small molecule deals worth $29.6bn (38%) and two vaccine transactions worth $3.1bn. In 2025, small molecules led $48.7bn to $42.4bn, or 51% to 45%. Small molecules commanded a higher average deal size ($4.9bn vs $4.6bn for biologics). In other words, while biologics led on count and aggregate value, the higher price per small molecule transaction underscores buyers' willingness to pay for attractive small molecule assets.

Cell therapy is a key driver of the biologics shift this year, with three acquisitions centered on this modality: Eli Lilly/ Orna, Eli Lilly/ Kelonia and Gilead/ Arcellx—compared with one such deal in 2025. Two of the three deals pursue in vivo CAR-T, while ADCs and next-generation antibodies account for most of the remaining biologics value.

Three small molecule deals were among the largest deals year-to-date: GSK/ Nuvalent ($10.6bn for zidesamtinib and neladalkib, both under FDA review), Eli Lilly/ Centessa ($7.8bn for the oral orexin-2 agonist cleminorexton) and Merck/ Terns ($6.7bn for the phase 1 BCR::ABL inhibitor TERN-701).

Looking ahead, despite the heightened deal activity in recent quarters, several companies still indicated an openness to additional business development opportunities. Public comments point to a preference for bolt-on deals topping out around $15bn, though a few (namely Merck, BMS and AbbVie) are not ruling out the prospect of larger transactions in the right set of circumstances.



CELL THERAPY IS A KEY DRIVER OF THE SHIFT TOWARD BIOLOGICS DEALS THIS YEAR



Product-Level Developments

PRODUCT LICENSING AND COLLABORATIONS

Product deal activity slowed from 10 product deals worth $32bn in Q1 to only three in Q2. That said, all three Q2 transactions were significant: Bristol Myers Squibb/ Hengrui ($15.2bn), Pfizer/ Innovent ($10.5bn) and Roche/ Nurix ($2.3bn)—with the first two being large multi-asset collaborations with Chinese companies that together cover 25 clinical programs. These two China deals alone account for 43% of total potential deal value in 1H26, taking strategic collaboration with Chinese companies to a new level and drawing heightened scrutiny that could potentially lead to a more restrictive environment for China dealmaking.

Product deals mirrored the therapeutic trend in M&A: oncology accounted for seven of the 13 transactions and over 66% of potential value. Immunology was the focus of three deals, whereas it dominated the count for M&A. It's also worth noting that obesity/ cardiometabolic products represented only one deal this year (AstraZeneca/ CSPC's $4.7bn collaboration for oral candidate SYH2082) compared with eight of 22 deals in 2025. As competing assets advance and the bar keeps rising, it becomes more challenging to find differentiated products.

Product deals showed the same shift toward biologics seen in M&A: small molecules accounted for the dominant share of both deal volume and value last year. In 1H26, biologics made up seven of the 13 deals, compared with five small molecules (excluding BMS/ Hengrui, which includes both).

Deal dynamics point to a split among our companies in terms of their preferred strategy for business development. Whereas Lilly and Gilead dominated M&A, Lilly had only one product deal in 1H26 (Innovent) and Gilead had none that met our threshold. Conversely, Sanofi, Roche and Novartis have been focused on building through licensing this year.

Note: Changes in the level of disclosure around transactions make comparisons across periods difficult. Historically, we have included product deals when with an upfront payment of at least $100mn and total potential value above $1bn. Since several deal announcements included only full potential value without identifying the upfront commitment, they were omitted from the analysis.

TABLE 3.
PRODUCT LICENSING DEALS AND COLLABORATIONS WITH OVER $100MN UPFRONT VALUE ANNOUNCED BETWEEN JANUARY AND JUNE

COMPANY/ TARGET COMPANY	KEY ASSET(S)	THERAPEUTIC AREA	SM OR BIO	UPFRONT DEAL VALUE ($MN)	TOTAL DEAL VALUE ($MN)
Novartis/ Pikavation Therapeutics	SNV4818	Oncology	SM	2,000	3,000
AstraZeneca/ CSPC Pharma.	SYH2082	Obesity	SM	1,200	4,700
Roche/ Nurix Thera.	Bexobrutideg	Oncology	SM	700	2,300
AbbVie/ RemeGen	RC148	Oncology	BIO	650	5,600
Pfizer/ Innovent Biologics	12 ADC programs	Oncology	BIO	650	10,500
Bristol Myers Squibb/ Hengrui Pharma.	13 early-stage programs	Oncology, hematology, immunology		600	15,200
Eli Lilly/ Innovent	Auto-immune assets	Immunology	BIO	350	8,850
Astellas/ Vir Biotechnology	AMX-500	Oncology	BIO*	335	1,705
Roche/ SanegeneBio	RNAi therapeutics		SM	200	1,500
Sanofi/ Kali Therapeutics	KT501	Immunology	BIO*	180	1,230
Novartis/ Sci-Neuro	amyloid beta-targeting antibody	Neurology	BIO	165	1,665
Sanofi/ Earendil Labs	undisclosed bispecific antibodies	Immunology; inflammation	BIO	160	2,560
Sanofi/ Sino Biopharm	rovadicitinib (Anxu)	Oncology	SM	135	1,530

**Cell therapy*
Bio: biologic molecule; Pharma.: Pharmaceuticals; SM: small molecule

CHINA-ORIGINATED ASSETS

China-originated assets accounted for eight of 13 product-related deals this half. There has been a steady climb in the number of deals over the last few years, with this half representing a step change in total value due to the broad nature of the collaborations. As noted in our blog post "From Fast Follower to Innovation Partner: The Evolution of Dealmaking between Global Biopharma and Chinese Companies", companies are no longer just in-licensing individual Chinese assets; rather, they are contracting for access to whole discovery pipelines. Innovent described its Lilly partnership as "combining our agile discovery and early-stage development engine with Lilly's extensive global scale" and "creating a highly efficient model for cross-border synergy". In its press release announcing the "landmark collaboration" with Bristol, Hengrui's EVP characterized the deal as "reflect[ing] Hengrui's continued commitment to strengthen our global presence."

COMPANIES ARE NO LONGER JUST IN-LICENSING INDIVIDUAL CHINESE ASSETS; RATHER, THEY ARE CONTRACTING FOR A PORTFOLIO OF ASSETS OR BROADER DISCOVERY PIPELINES

We are also seeing a handful of acquisitions of "NewCo" entities, which are biotech companies originated by in-licensing an asset from a Chinese company. While this differs from the traditional in-licensing model, it is an indirect way to acquire China-sourced assets and may become even more attractive if the U.S. adopts more restrictive policies around deals. This quarter, Gilead acquired Ouro Medicines for up to $2.175bn, gaining rights to a phase 1 immunology asset that was acquired from China's Keymed and GSK acquired RAPT in a $2.2bn deal centered on an immunology asset acquired from Shanghai Jeyou. These are excluded from our count of product deals with Chinese companies but are worth monitoring, particularly if additional restrictions are placed on more direct transactions.

"NEWCO" ENTITIES OFFER AN INDIRECT WAY TO ACQUIRE CHINA-SOURCE ASSETS

The change in both value and character of these partnerships has led to a high level of scrutiny among lawmakers, informed by a robust debate on the merits of protectionism vs partnership and collaboration.

TABLE 4.
DEALS WITH CHINA-BASED COMPANIES OR LEAD ASSETS ANNOUNCED BETWEEN JANUARY AND JUNE

PARTNERS	TERMS	PHASE OF LEAD ASSET	THERAPEUTIC PROFILE
AbbVie/ RemeGen	$650mn upfront, up to $5.6bn total	Phase 2	Oncology
AstraZeneca/ CSPC Pharmaceutical Groups	$1.2bn upfront, up to $4.7bn total	Phase 1	Obesity
Bristol Myers Squibb/ Hengrui Pharma	$600mn upfront, up to $15.2bn total		Oncology, hematology, immunology
Eli Lilly/ Innovent Biologics	$350mn upfront, up to $8.85bn total		Immunology; oncology
Novartis/ Sci-Neuro	$165 mn upfront, up to $1.665 bn total		Neurology
Pfizer/ Innovent Biologics	$650mn upfront, up to $10.5bn total	Range	Oncology
Roche/ SanegeneBio	$200mn upfront, up to $1.5bn total		RNAi therapeutics
Sanofi/ Sino Biopharm	$135mn upfront, up to $1.5bn total	Phase 2	Oncology

DISCONTINUATIONS AND TERMINATED PROGRAMS

We identified 49 discontinuations of pipeline products by 14 of our 19 companies through disclosures and earnings calls for the first half of 2026. As pipelines mature and more late-stage clinical data emerge, discontinuations set a high hurdle for continued investment in less differentiated assets, particularly in crowded or dynamic disease areas. As usual, oncology dominated the overall count with 16 (33%) discontinuations, though we noted some therapeutic shifts from quarter to quarter. For example, oncology programs represented 42% of discontinuations in Q1 but only 22% in Q2.

On the other hand, six discontinuations were made in metabolic/ obesity pipeline programs, with five obesity programs terminated in Q2, representing nearly 22% of the quarter's total. There is a growing perception that existing drugs and late-stage obesity candidates may be difficult to top, particularly with their lead time and dominance in the market. In addition, companies like Roche and Amgen explicitly benchmarked their early-stage programs against their own leading assets before deciding to discontinue acmotatide and AMG513, respectively. A few programs that failed to make the cut were non-GLP-1 obesity mechanisms, such as Novo's oral CB1 agonist and Pfizer's GIPR antagonist.

Among the other discontinuations, eight were in neurology/ CNS and eight were in immunology, including three that were part of Sanofi's pipeline cleanout under its new CEO. CNS agents continue to have an elevated attrition rate, including failures across Alzheimer's disease, Huntington's disease and neurodegeneration (though no single indication is over-represented).



AFTER A SURGE IN NEW OBESITY PROGRAMS THE LAST FEW YEARS, WE SEE A SLOWDOWN IN DEAL ACTIVITY AND AN UPTICK IN ATTRITION WHEN ASSETS CAN'T MEET THE HIGH BAR FOR NEW INVESTMENT

Roche and Pfizer have had the most discontinuations so far this year, with eight each. The decisions span a range of therapeutic areas and are consistent with the companies' multi-year focus on pipeline prioritization and R&D productivity.

The split between small molecules and biologics was roughly even for the quarter but still skewed towards biologics for the half (55% vs 45%). The higher number of small molecules this quarter reflects the shakeout we noted in the early-stage obesity pipeline. Notably, none were dropped for safety reasons and likely didn't offer sufficient therapeutic differentiation to justify continued investment.

Another change from 2025 is the presence of several programs further along in development, including four phase 3 (8%) terminations. Last year, discontinuations skewed towards early-stage programs, with ~60% in phase 1—consistent with the increased discipline around failing early before moving into larger and more costly late-stage trials.

Some strategic cuts were driven by changes in the competitive landscape and clinical failures, all of which are expected as companies take on more risk in pursuit of disruptive technologies. As programs mature and trials read out, some will fall short of clinical endpoints while others may be displaced by emerging science. There were a few failed late-stage trials of high-priority programs this quarter, including AstraZeneca's cardiovascular outcomes trial for Wainua, Novo Nordisk's phase 3 program for ziltivekimab in cardiovascular disease and chronic kidney disease and GSK's camlipixant for chronic cough. (The full results for the drugs are still being evaluated, and they may continue in development, but their prospects have been diminished by the clinical setbacks.)

Companies have discretion about when and whether to disclose terminations of pipeline assets – and materiality thresholds vary by company. Lilly announced its decision to stop disclosing pipeline candidates in phase 1 development. While we don't read anything sinister into the decision (which aligns with Merck's existing practice), it will make it more difficult to track changes in the early-stage pipeline and may also influence comparability with prior periods.

TABLE 5.
PRODUCT DISCONTINUATIONS BY THERAPEUTIC AREA AND MOLECULE SIZE

COMPANY	THERAPEUTIC AREA	NO. OF PRODUCTS	SM:BIO*
Pfizer	Immunology, metabolic, oncology, neurology/ CNS, dermatology	8	3:5
Roche	Immunology, metabolic, oncology, neurology/ CNS, other	8	3:5
Takeda	Gastrointestinal, metabolic, oncology, neurology/ CNS	6	3:3
AstraZeneca	Oncology, respiratory, endocrine	4	2:2
Bristol Myers Squibb	Oncology, neurology/ CNS	4	2:2
J&J	Oncology, ophthalmology	4	0:4
Astellas	Oncology, neurology/ CNS, musculoskeletal	3	2:1
GSK	Respiratory, neurology/ CNS, dermatology	3	2:1
Sanofi	Immunology	3	1:2
Amgen	Metabolic, oncology	2	2:0
AbbVie	Oncology	1	0:1
Eli Lilly	Immunology	1	1:0
Merck	Oncology	1	0:1
Novo Nordisk	Metabolic	1	1:0

**Excludes vaccines, radioligands, and radiopharmaceuticals*
Note: Counts are from company disclosures based on materiality thresholds and reflect unique products, not discontinuations at the indication level.

Discussion

Companies spent the first part of 2026 executing their strategic R&D priorities after external and macro-level uncertainties dominated 2025. Most have emerged with higher (albeit more disciplined) R&D investment behind high-quality, high-conviction assets. We have seen a recovery in company and product acquisitions, a number of encouraging product launches, and promising early readouts in a robust new product cycle. Recent late-stage trials have produced both noteworthy successes and a few disappointments. Two failures were in the cardiovascular space, including AstraZeneca's Wainua, a promising cardiovascular drug being tested in ATTR-CM and Novartis' recent disclosure that its lipoprotein(a) inhibitor (pelacarsen) failed to prevent major cardiac events.

While this report is focused on the current state of R&D among the large biopharma companies, it's worth stepping back to review the progress over the past several years. The IRA passed as the industry was already preparing for a major patent cliff, and companies were actively deploying capital towards new assets to fill their upcoming revenue gaps. Since that time, the funding environment for biotech companies recovered and they have been an important source for external R&D assets. Many of these investments are coming to fruition—with a number of important clinical readouts from novel agents in areas of significant unmet need, including disease areas that affect larger populations.

Several consistent themes have come to dominate the pipelines of the 19 companies we follow. Companies have deliberately specialized in the therapeutic areas that most closely align with their expertise and where they have the greatest likelihood of success. Companies are explicitly holding assets to a higher bar for continued investment, are prepared to drop undifferentiated (me-too) programs, and are giving commercial prospects earlier consideration and greater weight in R&D decision-making. Productivity and speed of the R&D organization receive stronger emphasis, including optimism about the role that AI can play in these areas. Overall, prioritizing and accelerating novel and differentiated pipeline assets suggests a qualitative upgrade in clinical development programs and the innovations they produce.

Even with these restructuring and prioritization programs, oncology and immunology have remained dominant therapeutic areas, maintaining a relatively stable share of overall pipeline programs. In oncology, the last several years have been characterized by a significant shift towards new modalities and treatment approaches, including antibody-drug conjugates (ADCs), bispecific antibodies, cell therapy and radiotherapeutics. Cancer treatments account for some of the most exciting clinical results since passage of the IRA, including Merck/Moderna's individualized neoantigen therapy, Merck's sac-TMT and Revolution's Rasonque for pancreatic cancer. In immunology, losses of exclusivity for earlier generation products such as Humira and Stelara prompted development efforts that have expanded therapeutic offerings to include TL1A inhibitors, IL-23s (including J&J's oral Icotyde) and CAR-T cell therapy.

Interest and investment in R&D programs focused on large addressable patient populations have grown significantly over the past several years, including in cardiometabolic and central nervous system (CNS) conditions. Obesity has led as the most active and dynamic therapeutic area. In 2022, Wegovy (semaglutide) was the only significant obesity product on the market and Zepbound was still a year from approval. Since then, the companies we follow have added more than 20 additional assets in this therapeutic area through acquisitions, licensing deals and organic development. Not surprisingly, the focus on obesity has spurred industry's interest in other cardiovascular and metabolic diseases, including MASH and cholesterol reduction. Treatments for CNS disorders with large populations such as schizophrenia, sleep disorders, and Alzheimer's have been approved with more moving through pipelines. Psychedelics were lead assets in a couple of recent deals.

Overall, the number of drugs in development has remained relatively stable. From mid-2023 to mid-2026, the number of pipeline programs increased by about 10%, albeit with wide variance across companies. The largest increases were Novo Nordisk, Regeneron and Lilly, which all increased the size of their pipelines by between 45% to 50%, with Novo and Lilly fueled by cash inflows from their GLP-1 franchises. Others have since meaningfully reduced the number of pipeline assets. Novartis and Roche intentionally pruned programs as they raised the bar for continued investment. The size of Novartis' pipeline has now returned to its 2023 level while Roche remains about 15% smaller, and both have much higher conviction behind the remaining candidates.

Small molecules have remained an attractive investment through this three-year timeframe, as well. While their shorter negotiation timeline is frequently cited as a disincentive for investment relative to biologics, the data from companies in our sample show an increase rather than decrease in small molecules. The absolute number of small molecule candidates increased 6% as pipelines were pruned to advance high-quality programs for large addressable patient populations. Chronic conditions with large numbers of patients are well-suited to treatment with oral medicines. Given their lower costs, straightforward manufacturing and ready market, these drugs align well with companies' desire to accelerate and compress product life cycles to maximize revenues.

In sum, the first half of 2026 brought several post-IRA trends into sharper focus. With policy and macro-level uncertainty largely behind them, companies are increasing R&D investment and using M&A and licensing to strengthen their pipelines with potential first-in-class and next-generation products. Rather than retreating from innovation, the companies we follow appear to be investing more selectively, accepting the risks of novel science in dynamic, highly competitive disease areas while holding programs to a higher bar.



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