How will smaller, smarter deals help life sciences companies shape the future with confidence?

EY M&A Firepower report 2025

The better the question. The better the answer.
The better the world works.

EY
Shape the future with confidence

Contents

Welcome

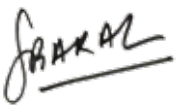
In 2024, life sciences companies pivoted away from large-scale M&A deals looking for smaller, smarter deals. The 2025 edition of the EY M&A Firepower report finds the industry widening the search for dealmaking in terms of geographies and technologies and tapping into emerging innovations.

In 2024, the dealmaking environment remained robust. Overall deal value dipped sharply, as biopharma companies continued to integrate and digest the string of multi-billion dollar deals they signed the previous year. However, the volume of deals (which we view as a better proxy) has remained robust, with the number of Biopharma deals increasing 17% year on year. Instead of major deals for de-risked market-ready assets, companies targeted bolt-on deals, earlier-stage acquisitions, and partnerships and structured deals with the potential for high returns on investment.

We expect a similar trend to continue into 2025, driven by strong fundamentals, notably the industry's dealmaking Firepower reserves of US$1.3 trillion heading into the new year. As the EY analysis shows, the leading biopharma companies now draw the bulk of their revenues from products acquired through mergers and acquisitions (M&A) and alliances rather than organic research and development (R&D) – and dealmaking will drive an increasing share of topline growth over the next five years. With looming growth gaps of over US$200 billion by 2030, companies will continue deploying their dry powder to access high-value innovations.

The industry is anticipating significant tailwinds from the incoming US administration's policies, potentially including reduced pushback on dealmaking from the Federal Trade Commission (FTC) and a possible softening or rollback of the pricing provisions of the Inflation Reduction Act (IRA). These policy shifts could potentially trigger major M&A plays.

However, we expect companies' search for the right deals – small and smart deals (partnerships, collaboration, bolt-on), including beyond the traditional heartlands of life sciences innovation and technological capabilities, will dominate the dealmaking in 2025. Making these smart moves and executing them successfully will be critical to life sciences companies' capacity to shape their own future with confidence.



Subin Baral

EY Global Life Sciences Deals Leader

2024: A reset year?

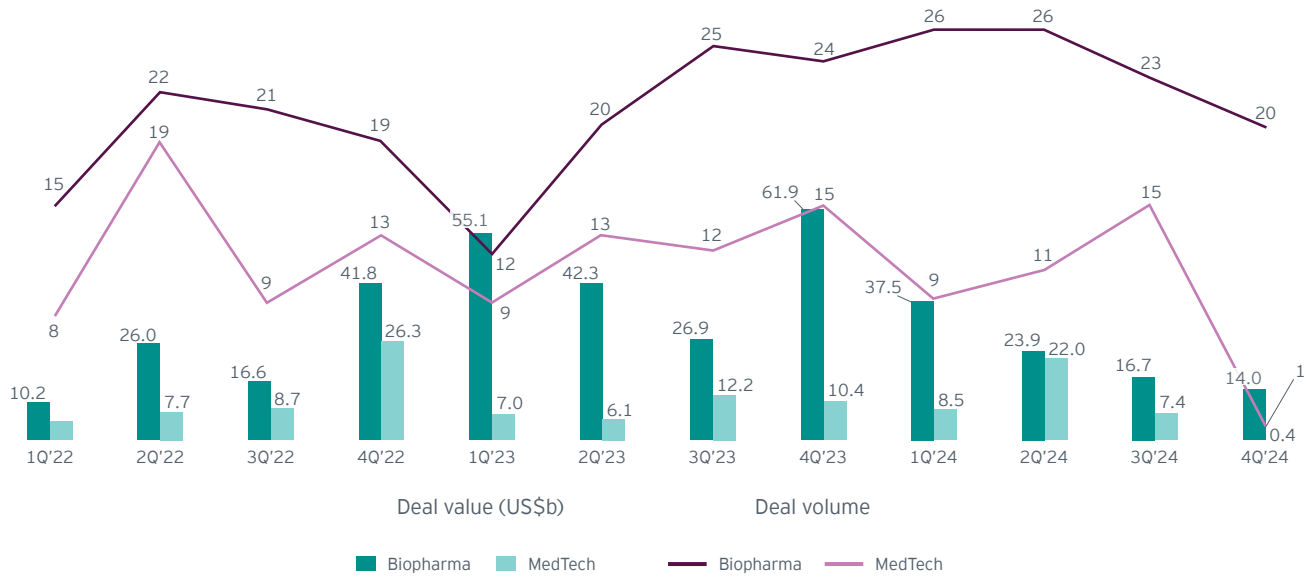
Life sciences M&A fell 41% in value in 2024 as the industry turned away from the big deals for de-risked assets that characterized 2023. For large pharmaceutical companies, 2024 may be a "reset year," as they integrate the acquisitions made the previous year.

The ongoing regulatory challenges from the proactive FTC and the ongoing implementation of the IRA in the US may also have led to the slow pace of activity this year. With a new administration incoming in January 2025, some of these regulatory uncertainties may be resolved, unlocking dealmaking potential in the new year.

US$1b

Average deal size

This is down 42% vs. 2023 as life science players pivoted toward smaller smarter deals.



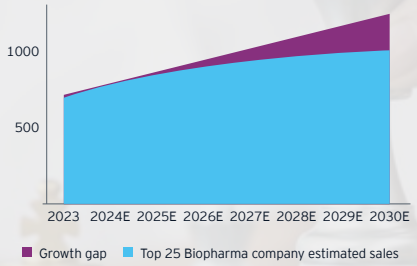
Deal or no deal? Drivers and restraints in 2025

US$1.3t

Leading biopharma players still hold high levels of M&A Firepower in 2025.

US$240b growth gap

2030 forecast



Potential post election tailwinds

Increased optimism and reduced uncertainties.

75%

The median premium paid for 2024 acquisitions – well above pre-2023 levels.

Limited targets

There are reduced numbers of de-risked revenue opportunities companies can acquire.

Organic vs. inorganic growth

Ongoing operational pressures and capital allocation trade-offs.

At the start of 2025, there are strong structural reasons to expect a return to dealmaking, though some aspects of the regulatory and policymaking aspects remain unclear going into the new year.

Drivers:

- The industry still holds US$1.3 trillion in dealmaking Firepower, meaning dry powder is there to make bigger deals – though the Firepower is unevenly distributed, with Novo Nordisk and Eli Lilly dominating.
- The industry still faces upcoming growth gaps, with patent expiries set to open up US$240 billion in growth gaps for the top 25 biopharma companies by 2030.
- The incoming administration may offer significant tailwinds to the industry in the form of corporate tax rate cuts and a potential rollback of the IRA's drug pricing provisions and the FTC's interventionist stance, as part of a general deregulatory shift.

Restraints:

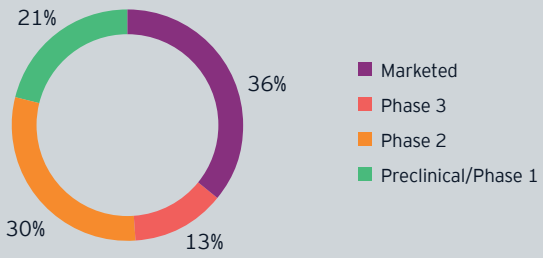
- The key assets remain costly going into the new year, with companies paying high premiums for desirable targets, relative to recent historical averages.
- After the 2023 M&A spree, there are relatively few highly prized de-risked assets available for companies to acquire; unconventional targets like AI and tech companies present challenges in terms of culture and integration. Meantime, signs of recovery in biotech financing (with venture capital funding up 27% in 2024) will increasingly offer biotechs the option to "go it alone" rather than seeking exits, potentially driving up the cost of acquiring these assets.
- Margins remain a concern across the life sciences industry, with costs for all inputs high and bottom lines affected, potentially with a chilling effect on capital allocation strategies.

2025: Year in prospect

Smaller, smarter deals

Smaller, smarter deals

Companies are looking for earlier assets



China is a new innovation hub

China's out-licensing dollar value is hitting new heights as the country becomes a major source of biotech innovation, but will this survive the BIOSECURE act?

300+

Artificial intelligence (AI) life sciences deals in the past five years (2020–2024)

Despite the headline number drop, life sciences companies did not turn away from dealmaking in 2024. In volume terms, dealmaking was stable, but average deal size dropped, as companies shifted focus to look for longer-range opportunities and milestone-based deal structures to bridge the valuation gap between buyers and sellers.

Instead of investing multi-billions to acquire de-risked, market-ready assets, companies targeted earlier-stage (pre-Phase III) assets, trying to tap innovation at an earlier point in the development cycle.

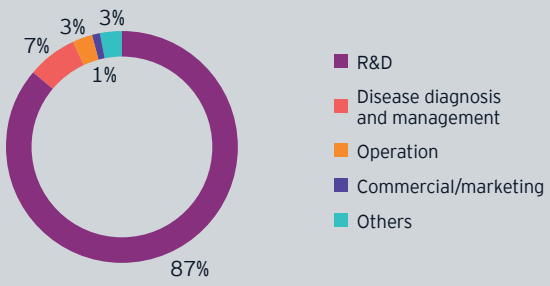
Companies are also looking for unconventional growth opportunities — including in the emerging AI field.

The life sciences AI opportunity

US$60b

In M&A and alliance AI deal value over the past six years. Most leading life sciences companies have one or more AI partnerships established.

R&D focus dominates life sciences AI spends



US$712m

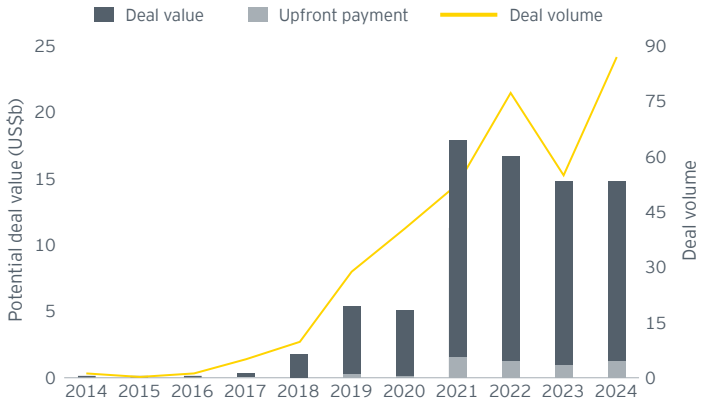
Amount Recursion Pharmaceuticals paid to acquire Exscientia in August 2024. It was the largest life sciences AI M&A deal to date.

The surge in AI partnerships and acquisitions in the past five years signals the opportunities the technology offers to life sciences companies. The biggest focus is on using AI to optimize drug discovery and development, but AI offers gains across the value chain from operations to commercial strategy.

Though life sciences companies are looking at AI opportunities across the value chain, one of the biggest challenges going forward will be finding a way of successfully integrating these technology companies to the demands of the life sciences industry. The EY CEO Confidence Index shows that life sciences chief executive officers (CEOs) see emerging technologies, including AI, as the biggest disruptor of the next 12 months, signaling the scale of the opportunity and challenge this new wave of innovation brings for the sector, alongside access to talent. Working with the disruptive potential and talent present in the rapidly expanding AI sector means life sciences companies will need to adapt their own mindsets and operational approaches to get the maximum from these cross-sector collaborations. In particular, life sciences companies need to build these capabilities:

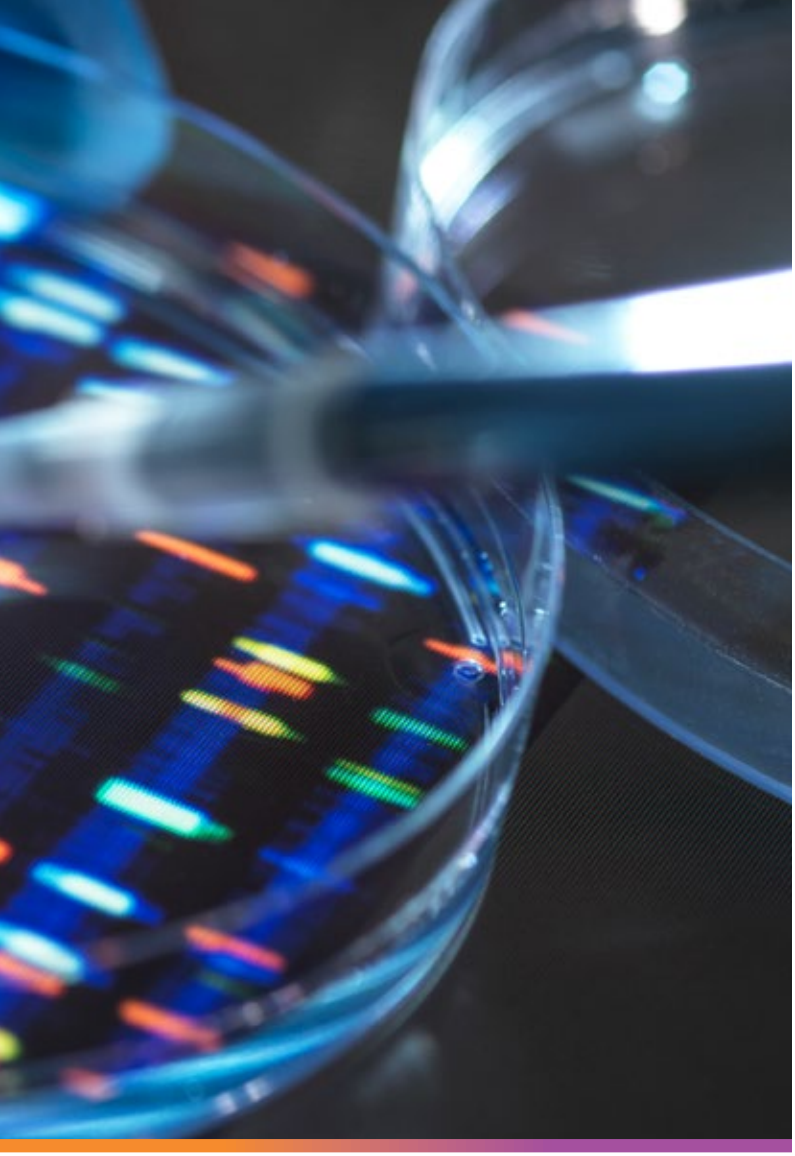
- **The right data strategy:** AI needs data, but life sciences data carries a heavy regulatory burden and companies need to negotiate this conflict intelligently.
- **Using AI end-to-end:** AI needs to be embedded in processes and workflows for maximum efficacy, not used as a one-off tool for problem-solving.
- **Education:** Life sciences teams need confidence in using and trusting AI, but also need to be able to critique outputs and feedback to optimize workstreams.
- **Integration:** companies need to solve the integration at every level from IT systems to people and cultures – tech and life sciences need to educate each other and form a true marriage for maximum mutual benefit.

Life sciences AI dealmaking reached new heights in 2024



> AI companies seriously thinking about partnering with pharma need to understand the industry's expectations.

Selin Kurnaz
CEO and Co-founder, Massive Bio



EY: What challenges in the life sciences business model are Massive Bio trying to solve?

Kurnaz: Massive Bio is trying to enable health equity for any cancer patient that wants to get access to clinical trials, regardless of where they reside in the world and what their financial status is. Even in highly affluent countries, when you go to a medical oncologist, they will suggest a clinical trial at most 50% of the time, and even then they will only consider clinical trials within their own institutions. Outside the likes of MD Anderson or Memorial Sloan Kettering Cancer Centers, this means patients have very few clinical trial options.

However, worldwide there are over 14,000 actively recruiting clinical trials in oncology. Massive Bio is a matchmaker between these 14,000 clinical trials and cancer patients around the globe. Unlocking access to clinical trials for these patients takes pressure out of the system.

Because site networks are based on therapeutic area, you cannot create an all-comer patient recruitment company – others have tried and failed in the past. You need to focus on a specific therapeutic area. Oncology is our chosen target because it affects so many people and, as a result, is both the largest and the fastest-growing market.

EY: How does AI drive your business model?

Kurnaz: At Massive Bio, we view AI in three different components – first, pre-screening patients. Pre-screening a patient manually to enrol them in a clinical trial takes 25 minutes. Across 14,000 trials, that would take a full-time employee more than eight months. We aim to reduce that time to minutes, if not seconds, through the use of large language models that structure clinical and genomic patient information against clinical trial inclusion and exclusion criteria. Time is important to all of us – for a cancer patient, it is 10 times more so.

Second, patient identification. We use AI to consolidate and streamline the different datasets we use, from payers, diagnostic laboratories, speciality pharmacies and others, and to predict where the next cancer patient is going to appear who fits the characteristics of the trial you are recruiting for.

Third, patient and provider engagement. Our Patient Connect application runs on AI-based infrastructure and allows patients to gain access to trial pre-screening, monitor the process and engage with the app through chatbots. Our Clinical Network application is the first application ever to allow a treating oncologist to pre-screen and refer a patient, through the use of AI, anywhere in the world. It is also the first application augmented with AI for physicians to pre-screen patients independent of the electronic medical record (EMR).

EY: What are the opportunities and challenges of partnerships between pharma players and AI technology companies?

Kurnaz: In terms of what pharma companies do internally, they either have their own AI-related capabilities to make their processes more efficient, or they partner with external vendors to get that capability. In terms of partnerships, we work with pharma companies in two ways. One side is that we provide a lot of proprietary data. Without the right data, AI is an engine without gasoline. We have onboarded 160,000 cancer patients and pharma companies partner with us to access these data and to train their own models based on the data we provide them. The owner of the data, of course, is the

patient. We get patient consent to collect and process data, and maintain the right SOPs, processes, communications and transparency to ensure that everything works correctly from a regulatory perspective.

The other side is scale. In order to pre-screen those 160,000 patients you need AI to do the work for you. We bring pharma that AI component, so they do not have to develop it internally. This pre-screening capability is fundamental for pharma's drug development processes but at the same time it lies outside pharma's core specialisms. If you can bring the data and the scalability, the AI algorithms themselves are the easiest aspect of the problem — typically open-source, off-the-shelf algorithms are enough.

AI companies seriously thinking about partnering with pharma need to understand the industry's expectations. In terms of timing, big pharma processes are incredibly long; if a young company partners with pharma expecting to make rapid progress in three months, they are not thinking realistically. Another issue is that innovation is not the same as validation. As a company you may be innovative but pharma thinks in terms of numbers, results and success, and to be credible in front of pharma clients you need to think about how you satisfy those kinds of expectations. Finally you need to think about pricing and finding the right buyer – with a pharma company's Chief Medical Officer or Head of Therapeutic Area you may be able to negotiate a very different contract than if you approach the procurement function. All of these factors need to be kept in mind.

EY: How do you see the AI and pharma dealmaking landscape today?

Kurnaz: About 80% of the AI companies who were successfully fundraising in 2020-21 have gone bankrupt or are on the verge because they could not generate the revenue needed to meet investor expectations despite lavish spending. Generating revenue from AI-driven services to pharma is more difficult than going to Mars.

There are another 10% of companies now reaching the light at the end of the tunnel: pharma is currently running due diligence on these companies, and they will be acquired.

The remaining 10% are those like us, the future Amazons of the world. Their importance may not have been understood at the beginning, but their value is going to be realized over time like a fine aged wine. It may take 25 years to develop, but these players will be the ones that last to create the trillion-dollar companies of the future.

China: Widening the search for innovation value

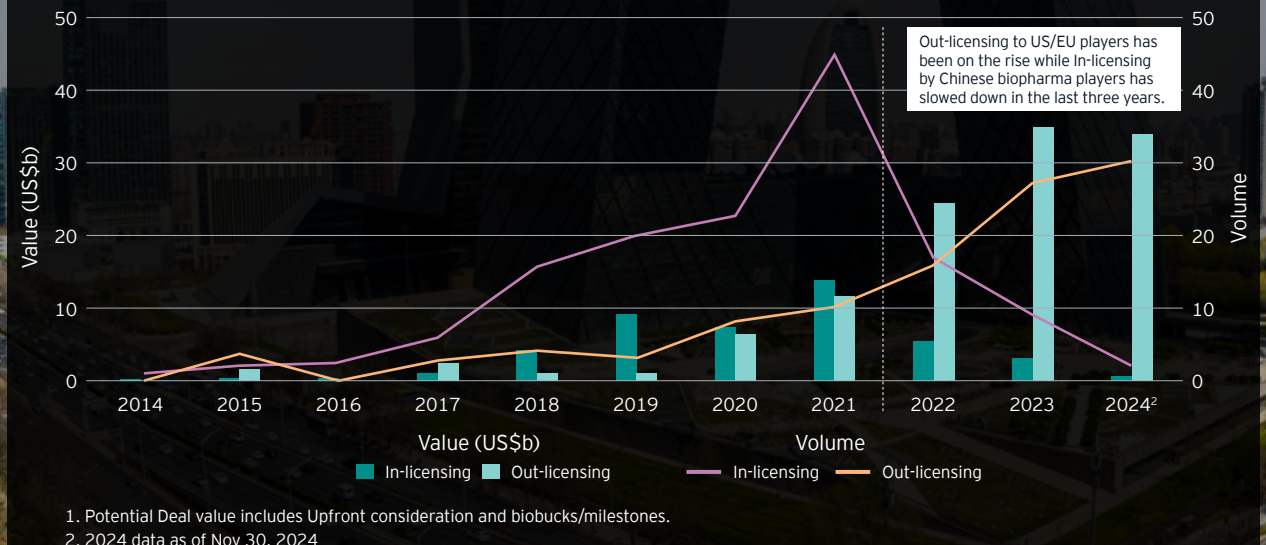
US$1.2b
Amount AstraZeneca paid to acquire Gracell Biotechnologies. It was the first-ever full buyout of an innovative Chinese biotech by a Big Pharma.

43%
of China deals are targeting coveted ADC technology.

US$4.2b
Biggest potential value (biobucks) deal of 2024 was Novartis/Shanghai Argo Pharmaceutical.

~85%
of China out-licensing deals are focused on oncology.

China strategic alliances trend (in-licensing vs. out-licensing), 2014 – 2024[1,2]



1. Potential Deal value includes Upfront consideration and biobucks/milestones.
2. 2024 data as of Nov 30, 2024

Life sciences companies are widening the search for new value drivers beyond the traditional fields of innovation. Novel modalities, from next-generation radiopharmaceuticals to multi-specific antibodies, are firmly on the dealmaking radar, after antibody-drug conjugates (ADCs) captured billions in M&A investment in 2023.

Digital technologies and AI are opening new frontiers in health care. R&D is also booming in geographies traditionally off the innovation map, particularly China, which is becoming an increasingly important target for companies seeking to license-in ADCs and other novel oncology treatments.

One of the biggest challenges to the growth of the new China life sciences innovation economy will be the US BIOSECURE Act due to take effect in 2032, which may limit companies' ability to collaborate across borders. With the China-US relationship facing an uncertain future in the new administration, life sciences innovation is just one of the areas where a new working model needs to be negotiated in the years ahead.

> “Our industry has to keep reinventing itself with innovative R&D pipelines.

Chris Sheldon
Senior Vice President, Global Head of Business Development, GSK

EY: What do you see as the biggest challenges for dealmaking and capital allocation in the current business environment?

Sheldon: Our industry has to keep reinventing itself with innovative R&D pipelines. That is how the healthcare innovation ecosystem works to ensure new medicines address patients' needs. At GSK, we are using targeted Business Development (BD) as an opportunity to reinvest in the business, seeking potential new medicines which can launch at the backend of this decade or early next decade as we continue to grow our pipeline.

Any single pharma company on the planet can only account for a small amount of global innovation – there is always more going on outside our four walls than inside, it is a simple numbers game. This is true for GSK and all our peer companies. For most big pharma players, more than 50% of commercial products or pipeline assets come from business development in some form. We always look for the intersection of compelling science, patient need, a good financial fit and the right cultural elements as a ripe starting point for industry leading BD. Truly transformational opportunities are rare but when we find them we ruthlessly pursue them with speed and agility.

Public company M&A is challenging because if a company has great data their value often rises very quickly and it becomes very difficult for pharma BD teams to make the risk and reward calculations work. That is likely why we have seen limited public M&A this year. However, as the IPO market cooled down in the last few years, more companies are staying private for longer, advancing and de-risking their programs rather than seeking an early IPO exit. This means more de-risked innovations with clinical data, which is often the sweet spot for pharma M&A.

EY: In terms of potential M&A targets, how much importance do you attach to therapeutic area focus, compared to, for example, targeting new modality platform technologies?

Sheldon: No one company can do everything. It is absolutely critical to scale and build strategic focus in core therapy areas. To scale a business in a given therapy area, you need deep subject-matter expertise; every therapy area is competitive and knowledge of the specific ecosystem and community is so important, from building relationships with key external experts to recruiting patients for clinical trials.

At GSK, we are investing deeply in areas where our pipeline has the greatest potential impact for patients: infectious diseases, HIV, respiratory/immunology and oncology. In all of these areas we are very well positioned to deploy the expertise and global capabilities necessary to create value for patients. We focus our strategy around product area leadership teams (PALTs), working at the intersection of R&D, commercial and medical to ensure a full cross functional representation of a given therapy area.

In today's multi-modality era, with the rise of advanced modalities such as ADCs, Oligonucleotides, T cell-engagers and others, you also need to find the best modality for a given target to ensure the greatest potential for patient benefit. In terms of platform deals we are interested if a platform is the right modality for a specific use case and clearly demonstrated with data. Specifically, a validated program with the right attributes including the ability to address an unmet medical need and disrupt standard of care with best or first in class credentials. The bigger picture is key here: we think in terms of disease area, unmet need, a compelling target with clear disease linkage, and, within that, which modality is right one for this target. Ultimately our goal in pharma is to get great medicines to market, I define those as one with great effect sizes and therefore the best way to achieve that is through a deep therapy area focus.

EY: What about digital technologies and AI? What role do they play as targets, or even within the BD process itself?

Sheldon: Embracing advances in technology is core to our R&D strategy and we think in terms of two technology buckets. Firstly platform technologies, which are the technologies needed to discover, develop and manufacture medicines and vaccines. Secondly, data tech, which is the use of data to deeply understand human biology and disease mechanisms and to drive value-generating performance across our business.

In terms of BD specifically, we are a fundamentally relationship-driven industry where face-to-face debate at medical and scientific meetings, and speaking to investigators and clinicians, is core to our success. We are in the people relationship business, and technology will not replace those relationships, but it is a critical contributor to developing the right relationships. At every stage you need the best possible information to guide your business case with the human element infused to form the best partnerships built on trust and an aligned vision.

EY: How do you find the right deal in 2025? What factors do you look at in terms of possible partners, deal structures, different geographies?

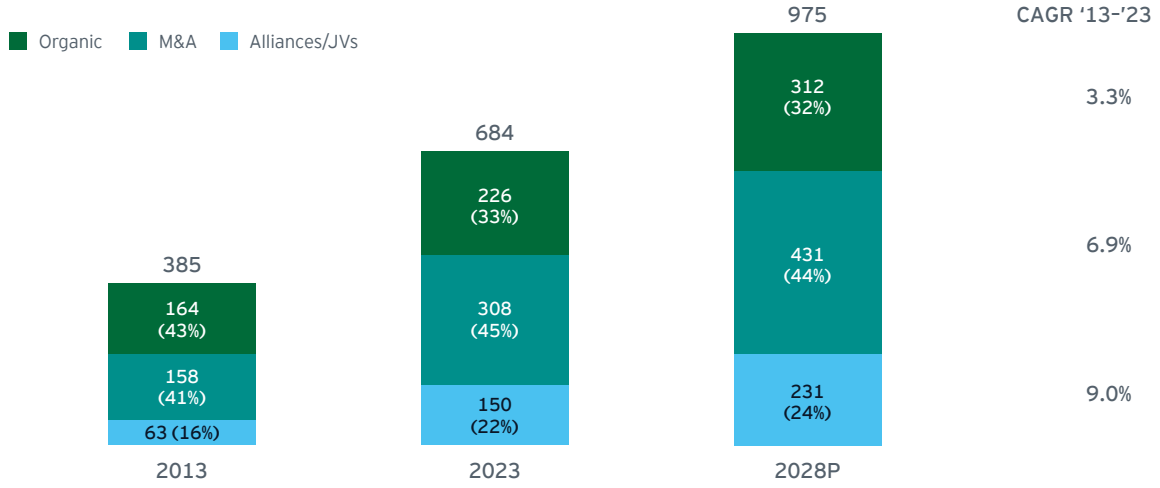
Sheldon: Partnerships for early-stage programs are typically kept strategically aligned but operationally independent. What I mean is we ensure the partner is not distracted and the entrepreneurial spirit and dedicated focus of smaller companies are maintained. What is important is that either side of the partnership recognizes their respective strengths and expertise. For M&A, higher levels of integration are often needed to extract full value from an acquisition, particularly assets needing parallel development for multiple indications where data and knowledge transfer is mission critical. We are also involved in other kinds of partnership, including academic collaborations and joint ventures (JVs). We see venture capital (VC) as an important part of the ecosystem for healthy and open debate. We consistently maintain our dialogue with the VC community as we scout the world for innovation.

At present, where we are searching for innovation has changed somewhat and that is leading to different deal structures. For example, China is an important source of innovation, and we have seen pharma, biotechs and even VCs forming companies around assets from China. That will increase because the Chinese ecosystem is well-equipped to develop advanced modalities and to generate early clinical datasets which help to inform western development plans. Often the deal model is that the Chinese company retains the rights in China and the acquirer leads everything else, presenting an opportunity for both companies to leverage their strengths.

At GSK we are deal structure agnostic and always open-minded; however, we would probably prefer a structure linking milestones to de-risking events along an asset's life cycle from discovery to commercialization as value is unwound and risk clearly discharged. However, it is just a fact of life that the seller often dictates structure, not the buyer, and in order to be the preferred partner, you have to be somewhat deal-agnostic — and as I always say, ultimately, every deal is a snowflake.

Why deals should be at the center of life sciences strategy

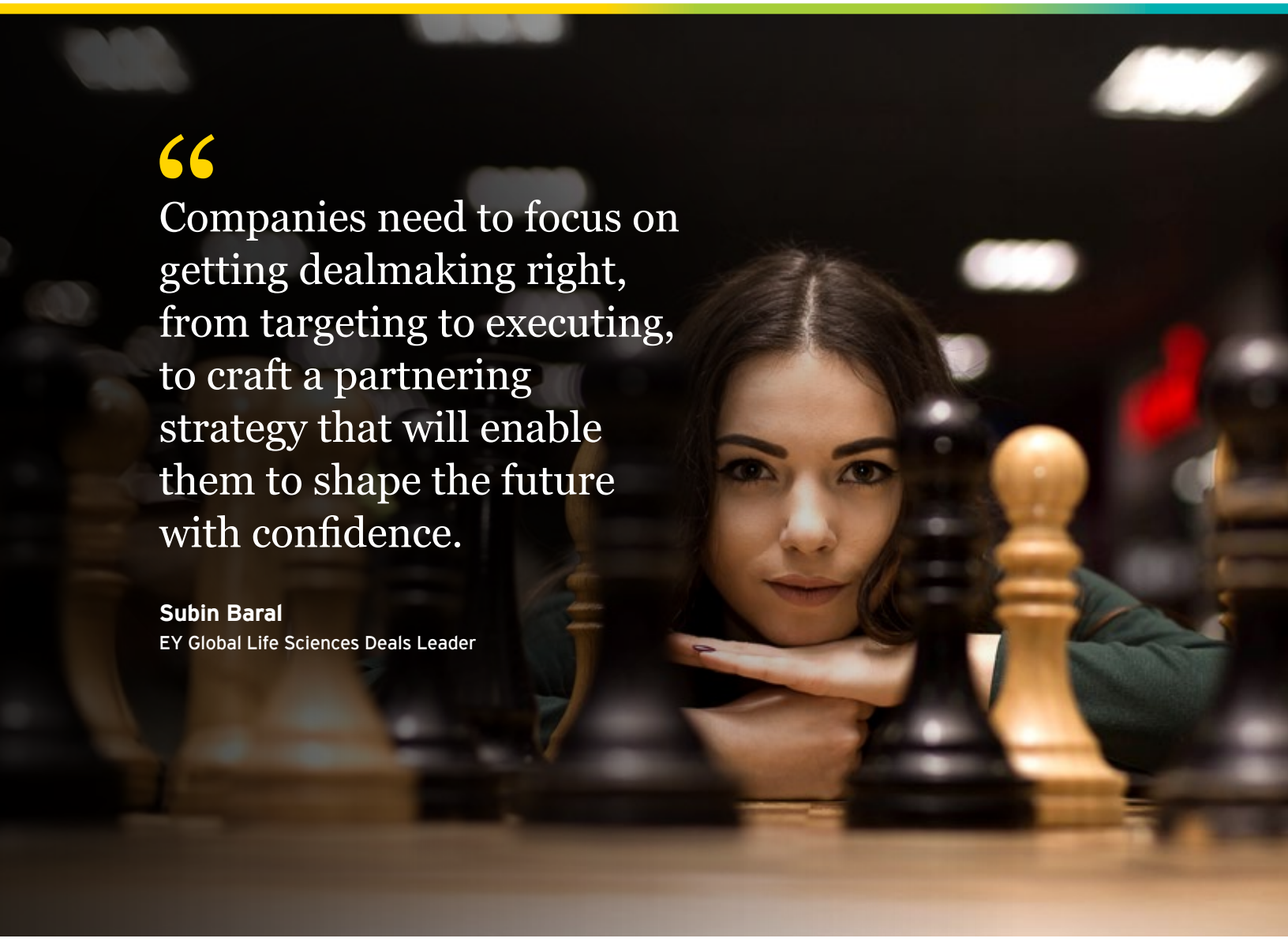
Sales breakdown by strategy for top 25 biopharma* (US$b)



- Products acquired through M&A generate the largest share of life sciences companies' overall revenues (45% in 2023).
- A decade ago, products derived from in-house R&D were the biggest source of company sales, but revenues from M&A products have outstripped organic revenue growth with a 6.9% 10-year CAGR.
- Alliance/joint venture-derived products have grown even more dramatically, with an 9% 10-year compound annual growth rate (CAGR), and represented 20% of company revenues in 2023.
- With nearly two-thirds of company revenues deriving from M&A, JVs or alliances, companies need a dynamic and proactive partnership strategy for future growth.

In conclusion:

- Deals will continue at the center of life sciences strategy, and companies need a robust partnering approach to secure future growth.
- Smaller, smarter deals offer strong potential returns on investment for companies with the agility to tap these strategic opportunities.
- Therapeutic area focus will remain a key priority in dealmaking, and we expect portfolio prioritization to continue with companies divesting non-core assets and investing in priority areas.
- Opportunities outside traditional technological and geographical areas of innovation — such as AI startups and China biotech — will continue to offer potential accelerated routes to growth.
- Across all dealmaking strategies, end-to-end execution is critical to realizing a strong return on investment, with culture and change experience at the center of execution strategies.



> “Companies need to focus on getting dealmaking right, from targeting to executing, to craft a partnering strategy that will enable them to shape the future with confidence.

Subin Baral
EY Global Life Sciences Deals Leader

Methodology

Dealmaking and financing analyses

Life sciences dealmaking and financing activities were analyzed from January 1, 2014 to December 31, 2024 using data from Capital IQ, Biomedtracker and PitchBook.

M&A deals with disclosed values greater than US$100 million were categorized according to the target's subsector (e.g., biopharma or MedTech) and by rationale as follows:

- **Asset swap:** transaction in which the companies participate as both acquirers and sellers, negotiating the exchange of assets with each other
- **Bolt-on:** small to medium-sized acquisitions that account for less than 25% of the buyer's market capitalization
- **Financial deal:** characterization used when the acquirer is a financial buyer (e.g., private equity) outside the life sciences industry
- **Geographic expansion:** acquisitions by a life sciences company specifically designed to access capabilities in a new geography

This does not include cross-border transactions that are part of larger, transformative transactions.

- **Megamergers:** acquisitions with valuations of roughly US$40 billion (biopharma) and US$10 billion (MedTech)
- **Transformative deals:** transaction in which the deal value is greater than 50% of the acquirer's market capitalization at the time of purchase

Acquired companies were classified by the stage and therapy area according to their lead asset, as defined by Evaluate Pharma. Unless otherwise noted, these analyses excluded deals for over-the-counter, generics or animal health products.

Firepower analysis

The EY organization defines Firepower as a company's capacity to fund transactions based on its balance sheet. It has multiple inputs, including (1) cash and equivalents; (2) debt capacity, including credit lines; and (3) market capitalizations. The following assumptions underpin the analysis:

- A company will not acquire targets that exceed 50% of its existing market capitalization.
- When a transaction results in a new company, the debt-to-equity ratio of the combined entity cannot exceed 30%.
- Equity is measured on a market value basis.
- The methodology does not calculate the ability to perform M&A via stock-for-stock transactions. However, increases in a company's stock price do increase a company's Firepower because increased equity enables companies to borrow more to finance transactions.

Firepower trends are measured across the biopharma and MedTech subsectors, as well as for individual companies. While some life sciences companies have made acquisitions that extend beyond the upper threshold defined in the Firepower methodology, the goal is to create a uniform approach to measure relative changes in Firepower.

The EY organization defines deployed Firepower as the ratio of capital spent on M&A or alliances by a company or subsector in a given period relative to the available Firepower as determined by the inputs described on the previous page. In instances where transactions by companies in two different subsectors took place, Firepower calculations were performed for the separate entities until the close of the transaction.

The 25 biopharmas included in the analysis were:

- AbbVie Inc.
- Amgen Inc.
- Astellas Pharma
- AstraZeneca PLC
- Bayer AG
- Biogen Inc.
- Boehringer Ingelheim
- Bristol Myers Squibb Co.
- Daiichi Sankyo Co. Ltd.
- Eisai Co., Ltd.
- Eli Lilly and Company
- Gilead Sciences, Inc.
- GlaxoSmithKline PLC
- Johnson & Johnson
- Merck & Co., Inc.
- Merck KGaA, headquartered in Darmstadt, Germany
- Novartis AG
- Novo Nordisk A/S
- Otsuka Pharmaceutical Co., Ltd.
- Pfizer Inc.
- Regeneron Pharmaceuticals Inc.
- Roche Holding AG
- Sanofi
- Takeda Pharmaceutical Company Ltd.
- UCB S.A.

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