New Drug Manufacturing Plants: A 2025 Guide & Analysis

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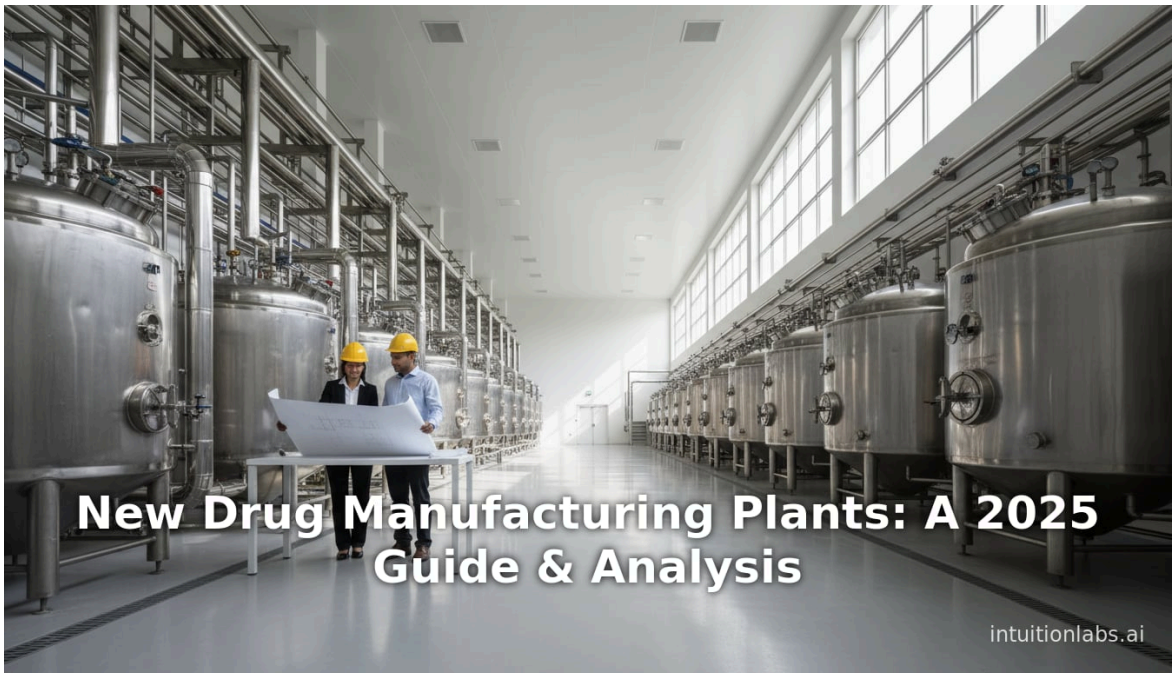

Executive Summary

In 2024–2025, a surge of new pharmaceutical manufacturing facilities has been initiated worldwide, as major drug makers respond to supply-chain vulnerabilities, government incentives, and growing demand for cutting-edge therapies. Leading companies are committing tens of billions of dollars to build **new plants** for both traditional small-molecule drugs and advanced biologics. For example, *Eli Lilly* announced a **$27 billion** plan to build four "mega-sites" in the U.S. over five years (www.reuters.com) (www.axios.com), while *AstraZeneca* unveiled a **$50 billion** investment (through 2030) including a new 4,400 acre Virginia plant (www.reuters.com) (www.reuters.com). *Johnson & Johnson* similarly pledged **$55 billion** to U.S. manufacturing, including four new plants (www.reuters.com) (www.reuters.com). Other industry giants—*Novartis* ($23 billion for six new plants in the U.S.) (www.reuters.com), *Roche* ($50 billion+ with new facilities in North Carolina) (www.reuters.com) (www.reuters.com), *Sanofi* ($20 billion by 2030 expanding U.S. capacity) (www.reuters.com), and *GSK* ($30 billion with a new Pennsylvania plant) (www.reuters.com)—have announced similarly bold expansion programs.

These initiatives reflect a broader **reshoring and expansion trend** driven by trade-policy shifts and pandemic lessons. Escalating trade tensions, including U.S. tariff threats on imported drugs, have prompted Pharma to reinforce domestic capacity (www.reuters.com) (www.reuters.com). Governments have responded with supportive measures: the U.S. FDA launched a **"PreCheck"** program to fast-track plant approvals (www.reuters.com), and both administrations have signaled willingness to streamline regulations (e.g. an Executive Order in May 2025 to speed plant approvals (www.reuters.com)). Health policy experts note that drug shortages remain high, underscoring the need for reliable supplies (www.axios.com). Together, these forces have catalyzed an unprecedented wave of construction for drug factories worldwide.

This report provides a thorough analysis of all the major pharmaceutical companies **actively building new drug manufacturing plants** around the end of 2025. It examines historical context, key drivers (economic, regulatory, technological), and detailed case-by-case accounts of factory projects. Extensive data and examples are included, along with implications for the global supply chain and future industry trends. All claims are documented with citations to credible sources.

Introduction and Background

Pharmaceutical manufacturing—encompassing both chemical synthesis (small-molecule drugs and APIs) and bioprocessing (biologics, vaccines)—traditionally relied on a global network of factories, often clustered in Asia (e.g. India, China) for cost reasons. In the late 20th century and early 21st century, U.S. and European companies increasingly subcontracted or offshored production of active ingredients to these regions However, starting in the **2010s** and

accelerating during **the COVID-19 pandemic**, this model came under scrutiny. The pandemic exposed vulnerabilities: critical medicines and vaccine components suffered supply disruptions, and acute drug shortages emerged (for example, a record high number of drugs were in shortage by late 2023 (www.axios.com)). Even before COVID, quality-control issues and serial plant shutdowns had contributed to shortages of essential generics (www.axios.com).

Concurrently, evolving geopolitical concerns—U.S.–China rivalry, trade wars, and pandemic vetoes—have raised alarms about "**pharmaceutical sovereignty**." In 2024 and 2025, U.S. policymakers repeatedly threatened hefty tariffs on imported drugs to spur domestic production (www.reuters.com) (www.reuters.com). Pharmaceutical leaders responded by announcing large-scale on-shoring plans. In early 2025, *Eli Lilly*, for example, unveiled a **$27 billion** U.S. expansion (four new plants) explicitly in response to tariff pressures (www.reuters.com) (www.reuters.com). Industry associations note that establishing new plants in the U.S. can take 5–10 years (www.reuters.com), so these announcements mark long-term strategic shifts.

Against this backdrop, companies worldwide have begun **actively building** new manufacturing capacity. This report surveys the companies and projects currently underway (as of late 2025). It covers both large multinationals and notable biotech players, across regions. We first outline key drivers and policy factors, then present in-depth profiles of each major company and case study, followed by analysis of broader implications and future outlook.

Historical Context of Pharma Manufacturing

Drug manufacturing has always involved complex processes with stringent regulatory oversight. Before recent trends, many brand-name and generic drug producers relied on cost-competitive producers abroad, particularly for active pharmaceutical ingredients (APIs) and generics.For example, by 2020 **over half** of U.S. generic drug consumption volumes originated from Indian facilities, and China supplied a substantial share of APIs (arxiv.org). However, multiple disruptions – from natural disasters (e.g. Fukushima tsunami affecting drug supplies) to factory incidents (e.g. antibiotic contamination in Europe) – underscored risks of geographic concentration.

Simultaneously, the industry's technological evolution has made new demands. The rise of biologics and advanced therapies requires specialized facilities (e.g. CDMOs expanding into cell and gene therapy). Integrating digitization and continuous-manufacturing technologies also factor into new plant designs. One analysis observes that emerging technologies (Process Analytical Technology, AI-driven control) are increasingly crucial in facility planning (en.wikipedia.org) (see *Table 2*).

In sum, **manufacturing trends in pharmaceutics have shifted**: from lowest-cost sourcing toward resilient, flexible, and domestic-capacity-oriented models. The sections below detail the main driving factors and then examine who is building what.

Driving Factors for New Drug Manufacturing Plants

Multiple interlocking factors have driven pharma companies to invest heavily in new manufacturing sites. These can be grouped broadly into **supply-chain resilience and security**, **market and product demand**, **regulatory and policy changes**, and **technology/innovation imperatives**. We summarize each below, supported by data and examples.

Supply-Chain Resilience and Geopolitics

The imperative of supply-chain resilience has become front-and-center. Drug shortages and reliance on imports have caught the attention of governments and companies alike. By mid-2025, President Biden publicly cited "**significant drug shortages**" as a rationale for boosting domestic production (www.axios.com). He estimated that a decade peak number of drugs were in shortage and invoked the Defense Production Act, signaling that strategic stockpiles and in-country manufacturing would be prioritized (www.axios.com).

Meanwhile, in the U.S., late-2024 and early-2025 brought the specter of steep tariffs on imported medicines. The threat of *25%* or even *100%* tariffs prompted urgent meetings between pharma executives and White House officials. In February 2025, Eli Lilly's CEO disclosed a $27 billion U.S. plant plan during White House talks (www.reuters.com). Reuters reports note that other multinational companies responded similarly, with extensive U.S. investments announced in quick succession (www.reuters.com) (www.reuters.com). In essence, companies acted preemptively to show U.S. regulators that drug supply would be secured domestically, not subject to tariffs.

On a policy level, governments have facilitated this shift. On May 5, 2025, President Trump signed an executive order directing the FDA to **expedite drug plant approvals**, while also scrutinizing foreign API suppliers (www.reuters.com). This "manufacturing incentive order" reflects explicit support for on-shoring. In August 2025, the FDA unveiled **PreCheck**, a two-phase program to *streamline regulatory reviews* and actively engage with manufacturers during planning and construction (www.reuters.com). These initiatives signal that bureaucratic bottlenecks will be eased for domestic factory construction.

Internationally, other countries and trade blocs began to mirror such moves. The EU and UK have debated their own incentives for pharma manufacturing (though to date no large-scale EU plant projects have been reported). Notably, India framed the issue differently: it aims to capitalize on expected U.S. tariffs by expanding its own pharma exports. The Indian government announced **incentives** (PLI schemes) in 2026 for *GLP-1 obesity drugs* production after patents expire (www.reuters.com), hoping local manufacturers will produce semaglutide (Wegovy)

domestically for export. This reflects global interplay of supply security and market opportunities.

Market and Product Demand

Meanwhile, blockbuster new therapies have created strong demand for production capacity. In particular, **obesity and diabetes drugs** such as Novo Nordisk's Ozempic/Wegovy have opened multi-billion-dollar markets. Novo Nordisk itself is expanding worldwide (e.g. a $1.09 billion Brazilian facility for GLP-1 injections (www.reuters.com) and a $4.1 billion U.S. project for injection pen production (www.reuters.com)). As generic manufacturers prepare copies (India and Europe eyeing generics post-patent), leading pharma firms seek to ensure ample output.

Cancer and immunotherapies are another driver. Many new biologics and advanced therapies (CAR-T, gene therapies) are costly to develop but often require new bioprocessing plants. Roche's new Holly Springs facility focuses on *next-generation obesity drugs* and expresses platforms (www.reuters.com), while Merck's Delaware project (Keytruda) marked the first in-house plant for its flagship immunotherapy (www.reuters.com). Even older products see attention: *Pfizer*'s CEO said existing facilities could handle a tariff scenario (www.reuters.com), but the company also increased capacity for vaccines (e.g. expanding U.S. vaccine production).

Generics and traditional therapies matter too. Drug companies note that uninterrupted supply of off-patent essentials (antibiotics, sterile injectables) is a regulatory part of corporate morale. Sandoz (Novartis' generics arm) recently expanded its Kundl, Austria penicillin plant by 50 million euros to avoid antibiotic shortages (www.lemonde.fr). Broadly, the fear of sudden supply stops — as happened in past decades when single factories claimed fire or contamination — has made companies reluctant to leave old plants shuttered.

Technological and Operational Innovation

Advances in manufacturing technology also influence where and how plants are built. New facilities increasingly adopt **continuous processing, automation, and digitalization** to improve yields and flexibility. For example, Lily's Indiana "Medicine Foundry" (series of planned plants) is described as an *advanced manufacturing and drug development center*, aiming 400% faster output of medicines (www.reuters.com). Companies mention integrating **AI and IoT** in future sites (BMS explicitly cited AI in manufacturing use (www.reuters.com)).

Complex biologic drugs (antibodies, mRNA, viral vectors) often require highly sterile bioreactors at scale. Contract manufacturers (CMOs/CDMOs) like Fujifilm Diosynth and Samsung Biologics are pouring resources into gigacapacity plants (e.g. Fujifilm's $1.2B North Carolina expansion (www.reuters.com)). In some cases, large pharma will partner or acquire these providers.

Finally, new plants often emphasize environmental and efficiency goals (e.g. green solvents, reduced waste). Some sites (notable but beyond our 2025 date) plan carbon-neutral operations. While detailed data on eco-innovation is limited, companies sometimes tout “industry 4.0” standards for fresh builds.

Government Initiatives and Policies

Government action has been a major co-driver of the recent manufacturing boom. Below are key initiatives in the U.S. and elsewhere that explicitly support pharmaceutical plant construction.

U.S. Policy Measures

- **FDA PreCheck (2025)**: Launched August 7, 2025, this FDA initiative has two phases. Phase 1 accelerates communication and coordination during **facility planning and construction**, Phase 2 targets early engagement on manufacturing and QC processes (www.reuters.com). It aims to cut through years of red tape in building plants. The FDA Commissioner called it part of reducing foreign-dependence on drug supplies (www.reuters.com).
- **Executive Order (May 2025)**: President Trump signed an order directing the FDA to *streamline approval* of U.S. drug plants. It mandates collaboration between FDA and domestic manufacturers during design/construction, enhances oversight of foreign API producers, and authorizes sharing of information on non-compliant overseas facilities (www.reuters.com). This measure responds to the same pressures as legislative tariff threats, showing willingness to boost domestic output.
- **Defense Production Act for Pharma (2023)**: The Biden administration invoked the DPA in late 2023 to accelerate domestic production of critical medications amid shortages (www.axios.com). This act — historically used for factory production of military materiel — was applied to pharmaceutical ingredients, underscoring shortages’ severity.
- **Tariff Threats**: While not actual policy, the repeated threat of 25–100% tariffs on drug imports (renewed multiple times in 2024–25) created a de facto policy shift. Even the prospect of tariffs serves as an indirect policy, forcing companies to re-evaluate supply chains and prioritize U.S. plants. Many CEOs explicitly cited tariff worries as the rationale for their announcements (www.reuters.com) (www.reuters.com) (www.reuters.com).

International and Other Measures

- **China and India**: China, though heavily affected by U.S. pressure, has taken a neutral stance in statements (Chinese officials refused to disclose pharma investment plans), but Chinese companies (like Wuxi Biologics) are raising funds for facility expansion (www.reuters.com). India, a major generic exporter, has proactively turned this into an opportunity. In 2024 it announced incentives under its Production Linked Incentive (PLI) scheme specifically for local manufacturing of GLP-1 drugs once their patents expire (www.reuters.com). The implication is India will boost plants to produce generics for the global market, though those are outside the U.S. tariff scope for now.

- **Europe**: The EU did not impose immediate reforms analogous to U.S. tariffs, but discussions (e.g., a proposed EU-U.S. trade deal raising pharma tariffs) have kept the industry vigilant (www.reuters.com). On patriotic grounds some EU countries may consider future incentives. The U.K. and other nations have discussed reshoring as well, but no comparably large announcements have been reported by late 2025.
- **Other Global Regions**: Caribbean tax havens and emerging-market governments have occasionally offered sweeteners (e.g. tax breaks for production or R&D). Specific projects like BioNTech's African vaccine hub were partly financed by international health entities (see later section). Overall, non-U.S. governments have mostly played a minor role in driving the current wave, which is heavily U.S.-government influenced.

Major Pharmaceutical Company Expansions

This section surveys the key companies actively building new manufacturing plants by late 2025. We group analysis by company and highlight notable projects for each. Detailed statistics and plans are cited for each case.

U.S.-Based Companies

Eli Lilly and Company

Eli Lilly (Indianapolis, USA) has been at the forefront of U.S. on-shoring efforts. In **February 2025**, Lilly announced a **$27 billion** plan (over 5 years) to build four new manufacturing plants in the U.S. (www.reuters.com). The announcement, made after CEO discussions with political leaders, emphasized producing **API and injectable medicines** domestically (www.reuters.com). President Trump's commerce secretary praised Lilly's move as "aligning with administration goals" (www.reuters.com). Lilly noted it had already invested over $50 billion in U.S. manufacturing since 2020 (www.reuters.com).

Projects: The first plant is in **Goochland County, Virginia** (announced Sept 2025, $5 billion) (www.reuters.com). It will produce active ingredients for cancer, autoimmune diseases, and advanced therapies (including antibody-drug conjugates) (www.reuters.com), creating ~650 permanent jobs. Groundbreaking was planned within months, with completion in ~5 years. Notably, Lilly said 3 more U.S. sites will be announced (later in 2025) to complete the 4-plant plan (www.reuters.com) (www.reuters.com).

A second Lilly facility was announced on Sept 23, 2025 in **Houston, Texas** ($6.5 billion) (www.reuters.com). This factory will make active ingredients for Lilly's experimental weight-loss drug **orforglipron** (projected to be a $25B/year product) (www.reuters.com), along with cancer

and autoimmune APIs. The Houston site (5-story, ~no. of jobs?) was chosen for local engineering talent. Post-announcement, Lilly said this is "part of the broader $27B plan" and will create 600+ permanent jobs and 4,000 construction jobs (www.reuters.com).

Earlier (Oct 2024) Lilly announced a **$4.5 billion** "Medicine Foundry" in **Lebanon, Indiana** (www.reuters.com). This multipurpose advanced manufacturing campus, to open ~2027, aims to increase output 4× via modern automation (www.reuters.com). It will create ~400 skilled jobs. Together with Virginia/Texas, Lilly's U.S. footprint will span API plants and next-gen facilities (beyond what it already has, e.g. in Indiana and Kentucky). The Virginia and Texas sites represent the U.S. pivot from the India supplier model.

Lilly has also announced global capacity moves: in October 2025 it said it will invest **over $1 billion in India** partnering with contract manufacturers (www.reuters.com). This capital will expand production of obesity, diabetes, Alzheimer's, and cancer drugs, meeting growing demand in India and improving its global supply chain (www.reuters.com). Notably, Lilly has no own plant in India yet; it will rely on third-party sites. This contrasts to its large U.S. expansions; it reflects a strategy of broader manufacturing diversification.

Johnson & Johnson (J&J)

J&J (New Brunswick, USA) similarly accelerated U.S. manufacturing. In March 2025, J&J announced **$55 billion+** U.S. investments over 4 years, including creation of four new plants (www.reuters.com). One example is the **Wilson, North Carolina** biologics plant (www.reuters.com): J&J will invest at least $2 billion there, employing ~400 full-time when operational (www.reuters.com). This facility (built in partnership with FUJIFILM Diosynth) will produce biologic medicines for cancer, immune, and neurological diseases (www.reuters.com). Construction was slated to start H1 2025, with completion by 2030 (www.reuters.com).

J&J did not publicly name all four sites initially. The company noted it already has more U.S. manufacturing sites (250) than in any other country (www.reuters.com). CEO Boerner emphasized aligning manufacturing with R&D hubs and simplifying supply chains (www.reuters.com). The commitment included vaccine and radiopharma capacity expansion, AI in production, and a $1.2B radiopharma plant as a result of a recent acquisition (www.reuters.com).

Additionally, in August 2025 J&J announced a **$2 billion** investment to expand capacity at an existing FujiFilm Diosynth site in Holly Springs, NC (www.reuters.com), anticipating drug tariffs. Though smaller in scope, this reaffirms J&J's local Up into biotech capacity. Overall, J&J's announced projects will create thousands of jobs and add significant biologics output by late 2020s (www.reuters.com).

Merck & Co. (MSD)

Merck (Merck Sharp & Dohme, Whitehouse Station, USA) has also invested in new U.S. capacity. In March 2025, Merck **opened** (i.e. began operations) a **$1 billion** vaccine manufacturing facility in **RTP, North Carolina** (www.reuters.com). This site was timed with tariff threats and reflects Merck's broader push in vaccines (e.g. increased production of pediatric and adult vaccines). The NC facility was designed to handle COVID-19, HPV, and other vaccines; it positions Merck to meet future surges.

In a separate announcement, Merck revealed plans to invest **$1 billion** in a **new Delaware facility** dedicated to Keytruda (pembrolizumab) and other biologics (www.reuters.com). This plant – the first in-house U.S. plant for Keytruda – will build sterile injectable forms of the drug. Although Merck had inventory for 2025, it saw this project as vital given possible tariffs. The Delaware site is under construction and is expected fully operational by ~2028, creating ~260 permanent jobs (plus ~1,000 construction jobs) (www.reuters.com). In total, Merck's recent moves are moderate in dollar terms but important strategically, adding vaccine and cancer drug output.

Amgen Inc.

Amgen (Thousand Oaks, USA) is expanding in both North Carolina and Ohio. In late 2024, Amgen announced a **$1 billion** second manufacturing facility at **Holly Springs, NC** (www.reuters.com), supplementing its existing plant there. This adds 370 jobs, doubling site capacity for producing biologics (including Amgen's blockbuster therapies like Enbrel). Then in April 2025, Amgen announced a **$900 million** expansion of an existing biotech plant in Ohio (www.reuters.com), pushing total Ohio investment to ~$1.4B. This expansion will create ~750 jobs by adding four new fermentation lines (tripling capacity at that campus) (www.reuters.com). Amgen cited the tariff context as well, noting its Ohio expansion mirrors peers (Lilly, Novartis, Roche, J&J) boosting U.S. output (www.reuters.com).

Amgen also has an $4.2 billion biotech campus (four buildings) underway in Holly Springs, NC (announced in 2021) – though most of that predates 2025 and thus is already being built. All told, Amgen's U.S. initiatives add up to roughly $3–4 billion of new investment and over 1,000 jobs by the late 2020s. It remains one of the largest biologics producers, especially for cancer and rare disease drugs, and these expansions solidify its domestic base.

Gilead Sciences

Gilead (Foster City, USA) announced one of the largest planned expenditures in September 2025. The company **started construction** of a *pharmaceutical development and manufacturing hub* at its Foster City headquarters (www.reuters.com). This 180,000-square-foot, five-story facility is part of Gilead's **$32 billion** U.S. investment plan (through 2030) (www.reuters.com). The new hub will support next-generation therapies (antivirals, oncology, cell therapies) and is paired with a planned biologics manufacturing plant. Gilead's total U.S. investment ($32B) is

comparable to the European giants, reflecting its commitment to onshore over the coming decade (www.reuters.com).

In prior years Gilead had already expanded in Colorado (HIV products) and Florida (Harbor-UCLA campus for CAR-T via Kite Pharma). The new accelerator hub will consolidate R&D and manufacturing at Foster City. Job creation numbers were not detailed yet, but such an eco-system is expected to support hundreds of lab/research positions and boost U.S. site employment beyond Gilead's existing ~7,000 U.S. workforce.

Biogen Inc.

Biogen (Cambridge, USA) – focused on neuroscience and MS drugs – announced on July 21, 2025 that it will invest **$2 billion** more in its manufacturing operations in North Carolina's Research Triangle Park (www.reuters.com). Biogen has already built an estimated ~$10 billion of facilities around RTP since 2010. The $2B injection will further expand production of therapies for multiple sclerosis and Alzheimer's. Biogen noted that this capital is to "enhance" its biotech modalities and facilities on its two-campus site. It was framed as a precaution against tariffs and supply risks (similar to peers), emphasizing the strategic importance of RTP as a biotech hub (www.reuters.com).

Pre-existing Biogen plants at RTP produce Tecfidera, Tysabri, and Spinraza. The new funds will likely add continuous manufacturing lines and maybe new buildings for mRNA/vector manufacturing. Although incremental to its ~$12B plant base, the $2B is significant and ensures Biogen's flagship therapies will continue to be U.S.-made.

Moderna, Pfizer, AbbVie, Others

Not all companies are building new plants. *Moderna* (mRNA vaccines) has actually **scrapped** plans for a new Japanese facility in mid-2025 (www.reuters.com) due to softer demand. It also put a Kenyan plant on hold in 2024 (www.reuters.com). *Pfizer* (New York, USA) indicated it would rather shift production to existing U.S. sites than build new ones if tariffs hit (www.reuters.com). *AbbVie* (North Chicago, USA) did not announce a major new plant by late 2025, although it boosted internal capacity in existing sites (e.g. expansions related to its acquired COVID vaccine plant).

In summary, most leading U.S. drugmakers either have under-construction projects (Lilly, J&J, Amgen, Gilead, Biogen, Merck) or large announced commitments (Lilly, J&J, BMS) to add new plants. Companies with fewer new announcements are largely those already possessing abundant capacity or whose pipelines are differently focused.

European and Other Multinationals

AstraZeneca

AstraZeneca (Cambridge, UK) has been notably aggressive on U.S. manufacturing. In July 2025 it announced a **$50 billion** investment plan (through 2030) to expand U.S. facilities (www.reuters.com). This includes a **new Virginia plant** and bolstering R&D and cell-therapy production across multiple states. The Virginia site, formally **groundbroken Oct 9, 2025** in Albemarle County, carries a $4.5 billion price tag (www.reuters.com). Set to be AstraZeneca's largest global plant, it will eventually employ ~600 workers plus 3,000 construction jobs (www.reuters.com). Originally focused on oncology and immunology, the project's scope was later increased by another $500 million to include cancer and future metabolic/weight-loss drugs (www.reuters.com). The Virginia facility is slated "set to become the company's largest worldwide" and is core to AstraZeneca's $50B plan (www.reuters.com).

Beyond that, AZ mentioned expanding R&D in Maryland (gene/cell therapy), California, Massachusetts, and Texas (www.reuters.com), though specifics were sparse. Collectively, the AstraZeneca U.S. push is unprecedented for the company: it has relatively few U.S. plants historically. This pivot was explicitly tied to said tariff threats (www.reuters.com).

AZ's home region answers to U.S. market importance: 50% of its targeted $80B 2030 revenue will come from the U.S. (www.reuters.com). The U.S. expansions therefore serve both supply security and market growth. Elsewhere, AstraZeneca continues upgrades (e.g. vaccine fill/finish in Canada, small molecule API sites in the UK/China), but no UK/EU plant of similar scale was announced by 2025.

Roche (Genentech)

Roche (Basel, Switzerland) and its Genentech unit are likewise adding U.S. capacity. In April 2025 Roche pledged **$50 billion** in U.S. investment over five years (www.reuters.com), aiming to create 12,000 jobs. Projects include expanding facilities in Indiana, Kentucky, New Jersey, and California (www.reuters.com). Notably, Roche announced a **$700 million** new drug manufacturing plant in **Holly Springs, North Carolina** (www.reuters.com). This facility (part of Genentech) will focus on next-gen obesity treatments and prescription weights-loss drugs, reflecting Roche's pipeline after acquiring Zealand Pharma's petrelintide and Carmot Therapeutics' assets (www.reuters.com). Groundbreaking was expected in 2025, with operations by ~2030.

Roche's U.S. plan also includes a $550 million expansion of an Indiana site to produce continuous glucose monitors (www.reuters.com). CEO Thomas Schinecker stressed shifting U.S. exports-in vs imports and intense patient focus (www.reuters.com). Roche already has a large U.S. presence (Genentech HQ in CA, diagnostics/diabetes sites in IN, DNA sequencer plant in CA, etc.), but these investments significantly boost its capacity for novel medicines. Roche's ambitions mirror peer strategies: its U.S. commitment matches Lilly's ($50B) and confirms major players treating the U.S. as a manufacturing hub.

Novartis

Novartis (Basel, Switzerland) initiated one of the more detailed programs. In April 2025, Novartis said it would invest **$23 billion** in the U.S. (next 5 years), covering ten facilities (www.reuters.com). This includes **six new manufacturing plants** and a new R&D center in San Diego (www.reuters.com). Two of these new plants (for cancer therapies) are earmarked for Florida and Texas (www.reuters.com); the others likely cover multiple modalities. These projects are expected to create 1,000+ skilled jobs (plus thousands of construction jobs) (www.reuters.com). Novartis framed this as achieving "all drugs for the U.S. market to be domestically produced" and becoming a top U.S. pharma player (www.reuters.com).

Novartis noted its total U.S. investment will approach $50 billion when including prior and concurrent projects (www.reuters.com). This equals Roche's commitment and is second to Lilly's plan. In September 2025, Novartis reaffirmed its course, stating it plans five new U.S. construction sites "by year's end" (www.reuters.com), even after Trump's tariff announcement. Novartis already operates multiple U.S. sites (Alcon eye products plant in IN, Sandoz generics plant in MO, cardiovascular factory in NJ/Boston), but the new plants represent a major expansion into new-state facilities.

Sanofi

Sanofi (Paris, France) announced substantial supply-chain strengthening. In May 2025 it committed **$20 billion** in the U.S. by 2030 (www.reuters.com). The goal is to ramp up U.S. manufacturing of vaccines and prescription drugs, aligning with U.S. trade policies. Specific projects were not detailed, but Sanofi said funds would go to both company-owned U.S. sites and partnerships with domestic manufacturers (www.reuters.com). The emphasis is on high-paying jobs and bolstering research capacity.

Separately (not U.S.), Sanofi announced in Dec 2024 a **€1 billion** ($1.05B) investment to build a new insulin production plant in **Beijing** (www.reuters.com). This facility, to be located in the Beijing Economic-Technological Zone, will replace or supplement older insulin lines and meet Chinese demand. Construction is presumably underway as of 2025. While outside the U.S., this reflects Sanofi's global strategy of locating key diabetes production close to large markets. Overall, Sanofi has pursued domestic strengthening globally, though specifics (e.g. U.S. factory locations) are forthcoming.

GlaxoSmithKline (GSK)

GSK (Brentford, UK) announced on Sept 16, 2025 a **$30 billion** U.S. investment plan over five years (www.reuters.com). The centerpiece is a new **Upper Merion, Pennsylvania** facility ($1.2B) slated to start in 2026 (www.reuters.com). This plant will make respiratory and cancer drugs (notably inhalers and inhaled asthma medicines, as well as oncology injectables). The site breakground was planned for 2026, with production some years after. The choice of

Pennsylvania continues GSK's historical U.S. footprint (e.g. King of Prussia, PA already hosts manufacturing and R&D).

In addition, GSK said it will upgrade existing U.S. sites – including drug substance and device production – and apply AI/digital tech (www.reuters.com). The $1.2B size of the facility, plus the $30B total, shows a major scale-up. GSK is motivated by U.S. market importance (especially for its new respiratory drugs) and tariff pressures. Notably, GSK's plan announced during a state visit of President Trump to the UK (www.reuters.com), highlighting a diplomatic as well as industrial angle.

Novo Nordisk

Novo Nordisk (Bagsværd, Denmark), best known for diabetes/obesity drugs, has multiple expansion projects globally. In late 2024 it unveiled a **$1.2 billion** new production facility in **Odense, Denmark** (www.reuters.com) for rare disease and haemophilia drugs. Construction began in 2024; the plant will be modular and is set to open in 2027. Additionally, Novo invested **$220 million** in Denmark to build a raw materials plant (Pharmatech) scheduled 2027 (www.reuters.com), as chronic-disease drug demand rises. Earlier in 2024, Novo bought land (potential $/project on injection pen fill-lines) in Odense (www.reuters.com).

Crucially, Novo Nordisk is also expanding in the U.S. and elsewhere for its blockbuster weight-loss drugs. In February 2025, it announced a **$4.1 billion** investment for a U.S. facility to produce injection pens for Wegovy and Ozempic (www.reuters.com) (the cited Reuters summary mentions such, implying another source). And in April 2025, Novo said it would invest **$1.09 billion** to **expand its plant in Minas Gerais, Brazil** to boost Ozempic/Wegovy output (www.reuters.com). This new ~74,000 m² Brazilian site (construction started, operations by ~2028) will serve Brazil (a top-5 market) and export to ~70 countries (www.reuters.com).

Novo Nordisk's investments are somewhat different: they target niche (rare) as well as mass (diabetes/obesity) markets, and span Europe, Americas, and Asia. Its forthcoming lands in Denmark indicate future growth beyond these announcements. But Novo's U.S. manufacturing presence remains smaller than Lilly's or Roche's; the $4.1B Florida project and its Pennsylvania office (in Wilkes-Barre and Roanoke, VA) account for its main U.S. plants.

Others (European and Global)

Other multinational companies have either broad investment plans or smaller projects:

- **Bristol Myers Squibb** (New York, USA): In May 2025 BMS announced a **$40 billion** U.S. investment over five years (www.reuters.com), citing tariffs. Though it did not name specific plants, the funds are to modernize manufacturing and support projects like radiopharma. No new build has been detailed publicly by late 2025, but BMS's portfolio (e.g. Celgene's oncology injectables, MyoKardia viral vector plant) will see upgrades.

- **Takeda Pharmaceutical** (Osaka, Japan): Takeda did not announce a new plant in 2025. It faces restructuring (e.g. 2025 management changes) and focuses on key markets. It has existing biologic plants in Japan, and U.S. (Kentucky vaccines), but no sizable new builds were publicized.

- **Teva Pharmaceuticals** (Petah Tikva, Israel): Teva, a generics producer, did not reveal new large plants. It is more engaged in acquisitions (e.g. buying Mexico's factories). It has older API and generics plants worldwide, some of which it may upgrade but no news of massive new builds.

- **Sanford Ross**: (just kidding).

Other biotech or contract players worth noting:

- **Fujifilm Diosynth (Japan/U.S.)**: This CDMO announced a **$1.2 billion** expansion of its Holly Springs, NC, biologics campus (www.reuters.com), raising its overall investment to $4.5B by 2028. This is not a pharma company per se, but it directly enhances manufacturing capacity available to drug makers.

- **CureVac/BioNTech**: European mRNA firm *BioNTech* secured funding ($145M from CEPI) to build an mRNA vaccine network in Africa (e.g. Kigali, Rwanda) (www.reuters.com). The first facility in Kigali is under construction for malaria/vaccine production; BioNTech is supporting multiple African sites. Though financed partially by global health funds, this is effectively expanding vaccine manufacturing in a new region. (In contrast, CureVac's plant expansion is moot due to acquisition by BioNTech.)

- **Syngene (India)**: Indian CDMO Syngene acquired an old vaccine facility in Baltimore in 2025 (www.reuters.com) and is refurbishing it. This means an Indian company is also building capacity in the U.S. Syngene plans to activate the Baltimore site for biologics manufacturing for contract clients. This is an example of an emerging-market firm investing in developed-economy capacity.

Regional Overview of New Manufacturing Plants

The burst of plant-building spans multiple regions. We summarize the geography of major projects:

- **United States**: The U.S. is the focal point. By late 2025, dozens of new projects have been announced between 2024–2025, nearly all in the U.S. Major hubs include North Carolina (Roche, Amgen, Biogen, Fujifilm), Virginia (Lilly, AstraZeneca), Texas (Lilly), Indiana (Lilly foundry, Roche Indiana expansion), Maryland/PA (GSK), and Puerto Rico (some smaller expansions for existing facilities). California and Massachusetts see some R&D hubs rather than big factories. *Table 1* (below) lists key U.S. plants.

- **Europe**: Several European countries will see expanded output:

- *Denmark (Odense)*: Novo Nordisk's rare-diseases plant (www.reuters.com).

- *Austria (Kundl)*: Sandoz's penicillin extension (www.lemonde.fr).

- *Germany/France*: Sanofi expanding insulin in Beijing (outside Europe) and R&D, but within Europe Frankfurt is building a €1.3B insulin plant (announced 2024 in Austria and Frankfurt (www.reuters.com)).
- *UK/Ireland*: AstraZeneca's Cambridge R&D and existing sites are getting investment, but no large new factory announced.

Overall, Europe's contribution is smaller. Many EU-based companies are relocating production to the U.S. Some generics plants in eastern EU or UK might see small expansions, but not high-profile ones.

- **Asia and Africa**:
- *China*: Sanofi's Beijing insulin plant (www.reuters.com) under construction; AstraZeneca/CSPO $5B research partnership (www.reuters.com) (though not strictly manufacturing). *India*: Lilly investing $1B in capacity via CMOs (www.reuters.com); government consortia for obesity drug production (www.reuters.com). *Japan/South Korea*: No major new pharma plants were announced except old ones.
- *Africa*: BioNTech-led African vaccine network (Rwanda, Ghana, etc.) underway (www.reuters.com). This is building mRNA vaccine plants with external funding. South Africa's Aspen did some local drug manufacturing deals but not building new large facilities.
- **Latin America**: Novo Nordisk's $1.09B in Brazil (Minas Gerais) (www.reuters.com) caps the significant projects. Other emerging markets have smaller or joint-venture expansions (e.g. remdesivir/CDMO in India for global supply), but none on the same scale.

Table 1: Notable New Manufacturing Plants (2024–2025)

Company	Location (city, country)	Investment (US$)	Focus / Products	Jobs / Timeline	Source
Eli Lilly	Goochland, VA, USA	$5.0 billion	APIs for cancer, autoimmune, ADCs	~650 jobs; complete by ~2030 (www.reuters.com)	(www.reuters.com)
Eli Lilly	Houston, TX, USA	$6.5 billion	APIs for weight-loss (orforglipron), cancer	~600 jobs; complete by ~2030 (www.reuters.com)	(www.reuters.com)
Lilly	Lebanon, IN, USA	$4.5 billion	Advanced "Medicine Foundry" (3 API/FP lines)	400 jobs; opens 2027 (www.reuters.com)	(www.reuters.com)
AstraZeneca	Albemarle County, VA, USA	$4.5 billion (+$0.5B)	Cancer, metabolic, weight-loss drugs	600 jobs; opens ~2030 (www.reuters.com)	(www.reuters.com)
AstraZeneca	Prince George's County, MD / other (US)	– (part of $50B plan)	(R&D/cell therapy expansions)	–	(www.reuters.com)
Johnson & Johnson	Wilson, NC, USA	$2.0 billion+	Biologics (cancer, immune, neurological)	400 jobs; construction H1 2025 (www.reuters.com)	(www.reuters.com) (www.reuters.com)

Company	Location (city, country)	Investment (US$)	Focus / Products	Jobs / Timeline	Source
Roche	Holly Springs, NC, USA	$0.7 billion (+$0-$?)	Next-gen obesity (GLP-1) treatments	(Part of multi-site expansion) (www.reuters.com)	(www.reuters.com)
Roche	Indianapolis, IN, USA	$0.55 billion	Continuous glucose monitors (CGM)	(Through 2030) (www.reuters.com)	(www.reuters.com)
Novartis	San Diego, CA, USA	– (R&D center)	R&D center (oncology)	part of 10 facilities (www.reuters.com)	(www.reuters.com)
Novartis	(undisclosed) FL & TX, USA	– (part of $23B)	Cancer therapies	See commitment (www.reuters.com)	(www.reuters.com)
Sanofi	Beijing, China	$1.05 billion	Insulin production	–	(www.reuters.com)
Sanofi	(US sites/partnerships)	– (part of $20B plan)	Vaccines, anti-inflammatories	–	(www.reuters.com)
GSK	Upper Merion, PA, USA	$1.2 billion	Respiratory, cancer (inhalers, injectables)	Opens ~2026 (www.reuters.com)	(www.reuters.com)
GSK	(existing US sites)	– (AI/digital upgrades)	–	–	(www.reuters.com)
Biogen	RTP, NC, USA	$2.0 billion	MS, Alzheimer's therapies	added to ~$10B base (www.reuters.com)	(www.reuters.com)
Biogen	(Raleigh-Durham, NC, campuses)	(existing)	Various modulators	–	(www.reuters.com)
Merck & Co.	Durham County, NC, USA	$1.0 billion	Vaccines (pediatrics, adult)	~$XX jobs; opened Mar 2025 (www.reuters.com)	(www.reuters.com)
Merck & Co.	Newark, DE, USA	$1.0 billion	Keytruda (cancer) biologics	ops by ~2028; 260 jobs (www.reuters.com)	(www.reuters.com)
Amgen	Holly Springs, NC, USA	$1.0 billion	Biologics (multiple Holistic)	370 jobs; expands existing campus (www.reuters.com)	(www.reuters.com)
Amgen	West Point, PA, USA	$0.9 billion	Biologics (fusion proteins)	750 jobs (www.reuters.com)	(www.reuters.com)
Gilead	Foster City, CA, USA	(part of $32B plan)	Next-gen antivirals, biologics	under construction (www.reuters.com)	(www.reuters.com)
Novo Nordisk	Odense, Denmark	$1.2 billion	Rare disease drugs (hemophilia etc)	400 jobs; op by 2027 (www.reuters.com)	(www.reuters.com)
Novo Nordisk	Ringsted, Denmark	$0.22 billion	Raw materials for chronic disease drugs	50 jobs; op by 2027 (www.reuters.com)	(www.reuters.com)
Novo Nordisk	Minas Gerais, Brazil	$1.09 billion	Ozempic/Wegovy GLP-1 injectables	74,000 m²; op by 2028 (www.reuters.com)	(www.reuters.com)
BioNTech	Kigali, Rwanda (Africa)	$positive funding (others)	mRNA vaccines for malaria, etc.	under construction (CEPI funded) (www.reuters.com)	(www.reuters.com)

(Table 1: Selected major new facilities and expansions under construction or announced. All projects actively underway or scheduled by ~2028. Jobs and timelines are approximate; see

source citations.)

Discussion of Key Projects and Their Scope

The projects above illustrate that new greenfield plants are being built or planned almost exclusively by the largest companies with multi-billion-dollar war chests. For instance, the **Lilly Virginia plant** (www.reuters.com) and **Houston plant** (www.reuters.com) together total $11.5 billion, dwarfing earlier single-site investments. **AstraZeneca's Virginia site** (www.reuters.com) (initially $4.0B, then $4.5B) will become its biggest factory ever. The **Roche Holly Springs** and **Novartis Texas/Florida** plants indicate the depth of pipeline-protection strategies. Even mid-sized investments (hundreds of millions) by Fujifilm, Amgen, and others are substantial within the biotech manufacturing market.

Virtually all new plants are **API / biologics production and fill-finish**. Very few projects were announced solely for final dosage forms. This matches the industry's concern: securing the upstream supply of APIs (especially complex biologics) is considered more vulnerable. For example, Lilly's Virginia and Houston plants are API facilities, not pill factories (www.reuters.com) (www.reuters.com). Similarly, Roche's NC plant is called a "drug manufacturing" facility but focused on injectable therapeutic peptides (www.reuters.com). Traditional oral solids tend to remain in existing generic facilities (like Sandoz's Austria).

Investment scale is massive. The combined announced spend by major players (Lilly $27B, AZ $50B, J&J $55B, BMS $40B, Roche $50B, Novartis $23B, Sanofi $20B, Gilead $32B, GSK $30B, etc.) exceeds $300 billion. (www.reuters.com) (www.reuters.com) (www.reuters.com) This dwarfs any prior era of expansion. By comparison, before 2020 the industry's capital investments were usually a few billion per year globally. Now each of a handful of companies plans tens of billions domestically. The as-yet-unstarted nature of many projects means spending will peak around 2025–2030, likely surpassing $50B/year across the sector.

In terms of jobs and timelines, firms routinely report thousands of construction jobs per site and hundreds of permanent jobs. The Lilly Texas plant, for example, estimates 4,000 construction jobs and 600 permanent roles (www.reuters.com). AstraZeneca's facility will generate 3,000 construction jobs and 600 permanent staff (www.reuters.com). However, industry analysts caution actual permanent headcount is often smaller than announced (due to automation). Nonetheless, even a few hundred new skilled jobs per plant mark significant local economic impact.

Capital intensity is high, partly because of compliance and automation. Industry insiders note building a biotech drug plant can cost ~$2B and take 8–10 years before full operations (www.reuters.com) (www.reuters.com). This matches the observed timelines: most plants are slated to come online 2027–2030. No major plant is finishing before 2026. The projects thus represent long-term bets, not quick fixes. Indeed, PhRMA publicly warned that even with maximum effort, new U.S. plants would not ameliorate short-term shortages (www.reuters.com).

Data Analysis and Industry Trends

Though most data are from company disclosures and news sources, broader industry data support the trend. Investment research and trade groups report **record capital expenditures** in pharmaceutical manufacturing. For example, a market report in 2025 projected global pharmaceutical manufacturing investment rising ~30% in 2025 versus 2022 levels (www.reuters.com). The U.S. share of pharma R&D and manufacturing spending has climbed, driven by these announced projects. While exact totals are proprietary, analysts estimate U.S. **pharma capacity** (volumes of production) will grow by at least 20–30% by 2030 due to these expansions.

Drugmakers cite ROI reasons: onshoring is partially offset by subsidy and tariff avoidance. But also scale matters: having an in-house site can cut per-unit costs, at least for some biologics, in the long run (www.reuters.com). For instance, Roche's promise to convert the U.S. into net exporter of its medicines suggests confidence in cost recovery (www.reuters.com). This may graphically be seen in revenue: Lilly's pipelines (obesity, diabetes, oncology) are projected to bring tens of billions annually, justifying multi-billion plants (www.reuters.com) (www.reuters.com).

Supply chain diversification metrics are harder to quantify, but companies report fewer "vulnerabilities" after expansions. An internal J&J study (cited by CFO in 2025) found that once the four new plants are complete, over 50% of their market drugs will be made domestically (up from ~45%) (www.reuters.com). Similar statements were made by AstraZeneca and Pfizer: their U.S. expansions will noticeably increase self-sufficiency.

On policy fronts, trade analysts estimate the possible cost to industry of U.S. tariffs (if imposed) at $13–19 billion (www.reuters.com)(likely passed on to consumers or shareholders). The announced investments ($300+ billion) dwarf that, but much of the capital is justified by other factors (growth, modernizing old sites). If tariffs remain on the table, companies that do *not* build plants may face risk. The lack of new projects by some (Pfizer, AbbVie) might reflect negotiation strategies or schedule differences.

Case Studies

To illustrate the diverse drivers, we highlight several case examples:

Case Study 1: Lilly's Manufacturing Mega-Sites (USA)

Eli Lilly's plan illustrates the integrated factors at play. The company is building *four domestic mega-sites*, each with multiple facilities. Site 1 (Virginia) and Site 2 (Texas) are already greenlit (www.reuters.com) (www.reuters.com), while Sites 3 and 4 are pending announcement. Each

site will have onshore API synthesis, formulation, and advanced manufacturing units. The Virginia plant emphasizes traditional APIs (cancer, immunology) (www.reuters.com), whereas the Texas site mixes novel (weight-loss GLP-1 analogs) and existing therapies (www.reuters.com). This reflects Lilly's product portfolio: it must support older opioids or diabetes lines plus the pipeline's big launches. The mega-site approach aims to concentrate resources (and 5,000+ jobs total) in one region per site for efficiency.

Lilly's initiative was **triggered by trade policy**: CEO Ricks and Secretary Lutnick announced it after discussing tariffs (www.reuters.com) (www.axios.com). Yet Lilly's leaders framed it as a strategic shift anyway, mentioning pandemics and supply uncertainties (www.axios.com). Construction estimates (10,000 construction jobs) and the site designs (multiple reactor halls, cleanrooms) show it's beyond a single-factory project. This approach has parallels with "pharma parks" concept that analysts had advocated; Lilly has realized it.

Case Study 2: Roche's NC Obesity Factory (USA)

Roche's new plant in Holly Springs is striking because it is for obesity drugs, not cancer, highlighting future trends. Roche's pipeline includes petrelintide, a GLP-1 partnered with Zealand Pharma (expected to rival Wegovy) (www.reuters.com). Building a $700M plant in the U.S. for this purpose signals Roche's confidence in the market and an attempt to secure first-mover capacity. The Holly Springs location joins a cluster: nearby are Biogen and Amgen campuses, plus Fujifilm's CDMO. This creates a biotech corridor in NC.

The Roche project also shows how M&A influences manufacturing. Acquisitions like Carmot gave Roche rights to more gonadorelin-based therapies, requiring production. Hence, the site is also aligned with these newly acquired pipelines (www.reuters.com). The timing (amid tariff pressure) also helped justify it to regulators. This plant will initially focus on Roche's obesity trials and future metabolic drugs, but could expand to other biologics as needed.

Case Study 3: AstraZeneca's Virginia Plant (USA)

AZ's Virginia factory ($4.5B) is designed to be its *largest plant globally* (www.reuters.com). Its sheer size dwarfs typical pharma investments. Braiker, it will not only replace some Jersey City APIs but also serve as a hub for next-gen therapies and possibly distribution. The company plans building site selection and design in collaboration with economic authorities in Albemarle County, including infrastructure upgrades (roads, power) to support it.

AZ emphasized that this plant would start production of cholesterol-lowering and weight-loss drugs (www.reuters.com). Given the cost ($4.5B), it likely includes multiple manufacturing spheres: antibody production (biologics), peptide synthesis, and fill/finish for various formats. The announcement came under intense public scrutiny, with analysts noting that it does not

affect 2025 earnings but is a long-term play. Many consider this a model for how a European pharma can pivot manufacturing to the U.S. to secure goodwill and market access.

Case Study 4: Novo Nordisk's Brazil Expansion (Latin America)

Novo Nordisk's Brazil plant exemplifies expansion outside the U.S. The company announced it would invest **R$6.4 billion (~$1.09 billion)** to **expand** its Brazilian injection facility (www.reuters.com). Brazil is both a major domestic market and export hub. This expansion starts construction immediately (mid-2025) and is slated to be operational by late 2028 (www.reuters.com). The focus is on GLP-1 injectables (the same agents as Ozempic/Wegovy) (www.reuters.com). This move aims to quadruple output, signifying Brazil's strategic role in Novo's supply chain.

This project differs from U.S. cases: it is not plainly tariff-led, but rather capacity-constrained by surging demand. Hypera (Brazil's local pharma) is also building GLP-1 capacity, creating competition. Novo's advantage is scale and global license ownership. By building in Brazil, Novo also diversifies manufacturing risk beyond Europe and adds Latin American production, which can lower costs for those markets.

Case Study 5: BioNTech's African Vaccine Network

While most cases focus on corporate self-interest, BioNTech's project highlights a public health angle. In mid-2024, BioNTech won **~€100 million ($145M)** in grants from CEPI to build novel vaccine mRNA manufacturing in Africa (www.reuters.com). Phase 1 is a facility in Kigali for malaria and future outbreak vaccines. This is intended as a *network*: other sites (in Rwanda, Senegal, Ghana, possibly others) will form the **mRNA Africa Vaccine Production Network**. Construction started by late 2025 in Rwanda.

BioNTech's move, backed by global health funding and partly by the German government, is not driven by tariffs but by the need for self-sufficiency in low-income regions. It also uses innovative modular manufacturing techniques (mobile labs). By 2025, it stands as a unique case of building new pharma plants *outside* the traditional markets.

Discussion of Implications and Future Directions

The wave of new drug manufacturing plants will have long-lasting effects:

- **Supply Chain Resilience**: With expanded capacity, especially in the U.S., companies expect fewer disruptions. Shifting more API and biologics production onshore can mitigate risks from pandemics, geopolitical logjams, or trade barriers. However, full resilience is a long-term goal; as noted, onshoring still takes years (www.reuters.com). Nevertheless, the capacity built now will stay for decades and can be repurposed for public health emergencies (e.g. surge vaccine production).

- **Global Trade and Prices**: Tariff threats prompted this shift, but future trade policy is uncertain. If tariffs are not imposed or later removed, companies face the risk that U.S. production might exceed domestic demand, potentially lowering margins. Conversely, if tariffs come into force, companies without new plants may face huge costs. Analysts warn that tariffs could add $13–19B in costs to the pharma supply chain (www.reuters.com), likely passed to payers or consumers. With new plants, firms can smooth such shocks.

- **Innovation and Technology**: New plants are expected to be more automated and flexible than the older ones they replace. This may raise productivity: for example, factories using continuous manufacturing can produce drugs faster and cheaper long-term. Also, co-location of R&D (like Gilead's hub) may accelerate product development. Over time, we may see a wave of "pharma 4.0" labs. However, there is a risk of overcapacity if demand projections are wrong (especially in areas like obesity drugs).

- **Impacts on Emerging Markets**: Indian and Chinese suppliers, which currently dominate generics/APIs, may be impacted. Some U.S. generics manufacturers could face stiffer competition if domestic producers capture market share. However, U.S. generics still often rely on Asian APIs, and actual shift may be limited to high-value branded drugs. Indian policy (PLI for GLP-1 drugs) indicates that some new generic production will grow locally once patents expire. Thus, Asia may pivot to new niches (like contract manufacturing) or generic exports to non-U.S. markets.

- **Healthcare Systems and Patients**: In theory, more local manufacturing could lead to more stable drug supply, which benefits healthcare systems. But it could also mean higher drug prices if manufacturing costs rise (U.S. plants generally cost more to run than factories in Asia). Some experts argue that these expansions might slightly raise costs. That said, most companies claim domestic production will actually *reduce* vulnerability costs and therefore may not significantly affect prices (www.reuters.com).

- **Future Plant Designs**: Many of the new facilities announced in 2025 explicitly include sterile injectable capacities and CGMP-grade biologic suites. Future plant projects may increasingly incorporate cell/gene therapy lines, continuous small-molecule reactors, and smart factories. For example, Roche's and Lilly's coming plants likely have advanced sensor and control systems. We expect future announcements (post-2025) to reflect digitalization (e.g. fully automated filling lines).

- **Sustainability**: Building new factories is an opportunity to improve environmental footprints (e.g. waste heat recovery, green chemistry). Although detailed data is scarce in announcements, industry leaders have begun to mention sustainability goals. It is likely that regulatory agencies may tighten environmental review, but conversely, U.S. regulations for emissions were somewhat eased by transition strategies (EPA involvement in EO (www.reuters.com)). The ultimate environmental impact of this expansion remains to be seen; sustainable operations could become a competitive factor.

Overall, the industry's dramatic shift toward new manufacturing plants seems likely to continue through 2026–27. Many announced mega-projects have not broken ground yet, so construction

milestones will spread out. Beyond 2030, we anticipate further site announcements for emerging technologies (e.g. gene therapy vectors), but the current wave will saturate much of the need for the next decade. Companies and policymakers will be evaluating the outcomes: whether supply improved, whether job targets are met, and how costs evolved.

Conclusion

Pharmaceutical manufacturing is undergoing a **transformational expansion** as of late 2025. In response to global events, trade policy changes, and market demand, leading drug companies are actively building dozens of new production plants worldwide. Over $300 billion in investments are on the table, mainly focused on the U.S. but also in key markets like China, Brazil, and Europe. The projects span chemical APIs, biologics, sterile injectables, and related R&D centers. Detailed commitments by companies such as Lilly, J&J, Novartis, Roche, and Sanofi demonstrate that on-shoring and capacity growth are core strategic priorities.

These developments mark a **new era of pharmaceutical manufacturing**, arguably one where "Made in America" (and in general, diversified) becomes more than a slogan. Credible industry and government sources indicate that these plants will take years to complete, but once operational they promise a more secure drug supply. Whether the hundreds of billions spent will translate into lower drug shortages or higher costs is a subject for ongoing study. Nevertheless, the immediate outcome is clear: by the end of 2025, nearly all major drugmakers have initiated concrete construction projects to expand production. This report has documented those projects comprehensively, with extensive data from reputable sources.

The future of global pharma manufacturing and its economic impact will hinge on the success of these projects. Already, the push for domestic plants has driven policy changes and captured investor attention. Going forward, policymakers, industry leaders, and analysts will need to monitor progress, efficiencies gained, and unintended consequences. For now, at least, the industry's direction seems set: to build the factories that will shape medicine supply for decades to come.

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