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Is China Poised to Overtake the US as Biotech's Global Powerhouse?

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What was once the United States' unquestioned domain is now China's fastest-rising frontier. China's biotechsector is reshaping the global industry. Big pharma companies are deepening ties with Chinese biotechs, clinical trials are growing at record speed, and patent activity is surging. With all these milestones, is China poised to dethrone the United States as the benchmark for biotech innovation and market leadership? Let's find out.

China has reached a major milestone in global pharmaceutical innovation. According to the latest report from Clarivate, *Mainland China Biopharma Innovation 2.0: From rapid growth to quality-driven development*, the country became the world's second-largest source of first launches of new molecular entities (NMEs) in 2024, with an 18 per cent share. The analysis, now in its seventh year, states that China's biopharmaceutical sector has moved from the Innovation 1.0 period into an Innovation 2.0 phase focused on steady, quality-focused development and wider global recognition.

A separate report from L.E.K. Consulting and PharmaDJ, *Advancing Innovation and Global Reach: The Next Chapter in China's Clinical Trial Development*, finds that China's clinical trial volume has reached about 80 per cent of U.S. levels and stands about 10 per cent above the EU in 2024.

New analysis from the Clarivate Centre for Innovation in Regulatory Science (CIRS) shows that of the 38 new active substances approved by six major global regulators between 2019 and 2023, 66 per cent (25) have been approved in China and 18 per cent (7) remain under review by the National Medical Products Administration (NMPA). Among the four Class 1 innovative chemical drugs approved in China, sponsors submitted applications before first global approval, and the shortest interval between NMPA approval and first global approval was 334 days. Some biopharma companies are now filing in China first, or earlier in China than in Australia, Canada, Japan or Europe. These cases are limited but indicate that China is being incorporated earlier into global regulatory and commercial strategies.

China's transaction activity continues to grow. Biopharmaceutical deal volume reached more than 8 per cent of global totals in 2025. From January through August 2025, out-licensing activity matched all of 2024, with transaction values reaching $50 billion. Projections for 2025 indicate continuation of the growth rate seen in 2023 and 2024. By August 2025, both out-licensing volumes and values had already exceeded all of 2024.

Therapeutic focus areas are also shifting. Between 2024 and 2025, interest in ADCs targeting HER2 and TROP2 slowed, while bispecific and multispecific antibodies and small-molecule therapeutics drew more attention. Targets such as PD-(L)1 × VEGF and GLP-1 receptors saw increased activity. In May 2025, Pfizer and 3SBio entered a collaboration under which Pfizer obtained global rights (outside China) to develop, manufacture and commercialise SSGJ-707, a PD-1/VEGF bispecific antibody. The agreement has a total value of $6.2 billion, including an upfront payment of $1.25 billion, setting a new record

for China-origin out-licensing deals.

The credibility of China-generated clinical data continues to increase. More China-origin medicines are receiving U.S. FDA breakthrough therapy designations and appearing at international medical meetings, contributing to wider recognition of China's clinical evidence.

Company-level R&D spending is a contributing factor. In 2024, the median R&D intensity among the top 20 Chinese innovators was 22 per cent, with an average of 28 per cent. This aligns with China's 14th Five-Year Plan for the Pharmaceutical Industry, which sets targets for double-digit annual growth in R&D spending among qualifying enterprises and R&D intensity of at least 10 per cent for the top 100 companies.

China's Biotech Rise Challenges US Dominance

Historically, the United States has maintained its top position in global biotech, but the gap with China is narrowing. China's ascent has been driven by a deliberate national strategy combining government financial support, aggressive intellectual property licensing from abroad, and major investment in laboratories, technology parks and academic research, according to a 2020 report for the Johns Hopkins University Applied Physics Laboratory.

But is this enough for China to surpass the US? Experts say the answer is far more complex. "That we are even discussing this question of China possibly reaching parity or surpass the U.S. as the world's leading biotech hub would have been seen as impossible even just 5 years ago," said **Helen Chen, Global Sector Co-Head for Healthcare and a Greater China Managing Partner of L.E.K. Consulting**. She added, "China's current success has been attributed to the investment over the past 2 decades, its large number of scientists, speed of development, and relatively lower costs. It is shaping up to have the potential to be a global R&D leader."

This is echoed by other analysts who point to China's execution advantages and the growing breadth of its innovation ecosystem. "China's structural advantages in execution speed, cost efficiency and specific modality leadership position it as an indispensable innovation source for global pharma. The United States maintains structural strengths in basic research ecosystems, capital markets, regulatory influence and commercial capabilities that continue to differentiate its role in the global biotech landscape. Current geopolitical dynamics are encouraging China to deepen regional partnerships and expand its innovation footprint across Asia, contributing to a more diversified and resilient global ecosystem," said **Mike Ward, Global Head of Thought Leadership, Life Sciences and Healthcare, Clarivate.**

However, while these strengths support China's rise, experts note that certain constraints remain. "A key structural disadvantage is the smaller commercial returns in China due to its much lower pricing and greater competitive intensity. It's hard to imagine a true global biotech hub that cannot provide direct financial returns to its native companies," said Helen.

This is why many analysts argue that the race will hinge on more than China's growth alone. A report from Contrary Research notes that the outcome will depend not only on China's continued growth, but on whether the US can maintain the coordinated response necessary to preserve its leadership in humanity's next defining industry.

"A key factor moving forward will be how the United States strengthens areas such as NIH funding stability, FDA operational capacity and biotech capital formation, while China continues to advance in basic research and IP enforcement. The pace and direction of progress in both countries will shape the next phase of global biotech development. As the National Security Commission on Emerging Biotechnology warns, 'The US's position, while challenging, is one of opportunity rather than inevitable decline'. The next three to five years represent a critical window where structural choices by both nations will shape the biotech landscape for decades," concludes Ward.

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