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# THE RISE OF CHINA IN BIOTECHNOLOGY

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"China's biotech industry while being increasingly international still relies on Western sources of capital to globalise these innovations. This symbiotic relationship has driven multiple licensing deals over the last 5 years – with increasing noise over the last two years."

## Introduction

China's rapid ascent in the field of biotechnology over the past few decades has not only redefined its own scientific landscape but

also shifted the global balance of innovation, investment and talent.

In recent decades, China has rapidly emerged as a global powerhouse in biotechnology, leveraging its vast talent pool, ambitious government policies, and expanding investment landscape. Under the policy of "new quality productive forces" public funding has been generous (EUR2.6Bn).

According to the MERICS report, China's strategic focus has also embraced the rapid development of intellectual property frameworks and regulatory modernization. These initiatives not only facilitate technology transfer and commercialization, but also support the country's ambition to move up the global value chain in life sciences.

To appreciate China's position in biotechnology today, it is essential to understand the foundations laid in previous decades. In the latter half of the 20th century, China began to invest in scientific research and higher education, recognising the strategic importance of innovation for national development. The establishment of national laboratories, the return of overseas-educated scientists, and targeted government initiatives set the stage for a robust scientific ecosystem. For example the National Natural Science Foundation of China (NSFC) spends at least CNY8.5Bn (~\$1.2Bn & 34% of its budget) on life science and healthcare research.

## "Made in China 2025"

The Chinese government has played a pivotal role in catalysing the country's biotech sector. A series of five-year plans, culminating in the "Made in China 2025" initiative, prioritised biotechnology as a pillar of national innovation. These policies fostered collaborations between universities, research institutes, and private enterprises.



- **Funding:** Massive government funding, especially via the National Natural Science Foundation and local grants, accelerated scientific discovery and commercialisation.
- **Talent Recruitment:** Programmes like the "Thousand Talents Plan" and "Young Thousand Talents Program" attracted leading scientists and entrepreneurs from abroad, reversing the brain drain.
- **Regulation:** The government streamlined regulatory approval for biotech products, enabling faster commercial translation of research breakthroughs.

*“China’s biotech ecosystem is vast and diverse, encompassing state-backed research institutions, agile start-ups, and global pharma giants.”*

## Research and Academic Excellence

Universities such as *Tsinghua, Peking, and Fudan* have established world-class life sciences departments.

The *Chinese Academy of Sciences*, with its sprawling network of research institutes, contributes cutting-edge research in genetics, synthetic biology, and medical innovation. The results are impressive, in 2013 China originated new clinical trials accounted for approximately 7.5% of trials with EU at 18% and US at 26%.

Now **China contributes to over 30% of new trials registered**, while the EU has fallen to approximately 9% and the US at approximately 16%.

Number of innovative new drugs has risen from approximately 31 (2022) to 78 (2025) an analysis by PhIRDA shows.

## International Impact and Collaboration

Chinese biotech stocks have surged in 2025, driven by demand from Western pharma companies licensing innovative cancer treatments.

Chinese firms, benefiting from lower R&D costs and faster clinical trials, have secured major deals - such as 3SBio’s \$1.25bn agreement with Pfizer - leading to sharp share price gains and growing global recognition.

This symbiotic relationship has driven multiple licensing deals over the last 5 years – with increasing noise over the last two years. Despite geopolitical tensions and potential U.S. trade barriers, deal activity is rising rapidly, with **\$18bn in licensing agreements signed in H1 2025 alone**.

Partly one could attribute this trend to a downturn in traditional sources of M&A for large pharma, with companies instead turning to China.

### Chinese biotech shares have surged after a prolonged slump



Note: Indices rebased in Hong Kong dollar terms/  
Source: LSEG via markets.ft.com

These partnerships help Western firms address patent expiries, though questions remain about Chinese biotechs’ ability to secure global approvals and scale internationally.

*Between 2022 and 2024:*

- *Average size of licensing deals have increased from US\$200m to US\$389m.*
- *Total value has increased from US\$800m to US\$3.9Bn.*

## Conclusion

China’s rise in biotechnology is a testament to how sustained investment, and a willingness to adapt and lead is important in this sector where timelines in bringing products to market is fraught with significant challenges. While there are significant geopolitical tensions that have emerged this has not halted the pace of dealmaking.

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Chandra is a Senior Advisor at Ciesco. With more than 20 years of international experience in the pharmaceutical and healthcare industries, he brings deep expertise in commercial leadership, strategic planning, market access, and business transformation across global, regional, and local levels.

Before his current role, Chandra was Regional Head of Marketing at GBT (Global Blood Therapeutics), leading up to its

\$5.4bn acquisition by Pfizer. He also held senior roles at MSD (Merck & Co), including Global Marketing Director for the rare disease franchise and Regional Market Access Lead.

His track record includes M&A integration, NHS turnaround initiatives, and commercial due diligence for mid-market healthcare transactions. Chandra is known for bridging scientific knowledge with strategic and financial insight to drive growth and impact.

## Ciesco

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