

# Is biotech the next battleground in US-China decoupling?

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The Biosecure Act, recently passed by the US House of Representatives, marks a significant escalation in efforts to decouple the American and Chinese biotech ecosystems. The bill, which passed with strong bipartisan support, would prohibit federal funding for US companies that do business with several named Chinese biotech firms, including industry giants Wuxi AppTec and BGI Genomics.

This move reflects growing concerns in Washington about China's ambitions in the life sciences and the potential national security risks posed by Beijing's access to sensitive genetic and healthcare data.

Proponents of the act argue that the legislation is essential to protect American interests and maintain technological leadership. The US government has increasingly prioritised safeguarding its technological advantage, as demonstrated by similar legislative measures in other hi-tech sectors, including semiconductors, artificial intelligence (AI) and clean energy. In this context, legislating biosecurity is seen as a natural continuation of these decoupling efforts.

However, severing ties with Chinese biotech companies could hamper global scientific collaboration and slow the development of new treatments. The biotech industry has become deeply intertwined, with US firms relying heavily on Chinese contract research and development manufacturing organisations (CROs and CDMOs) for development and production.

An ageing population is driving demand for new drugs and treatments, increasing the complexity of disease management. Conditions such as cancer, Alzheimer's and chronic illnesses are becoming more prevalent, further complicating the already lengthy and costly drug development process, typically taking 10 to 15 years and costing upwards of billions of dollars. Estimates suggest that of every 10,000 to 15,000 compounds tested during preclinical stages, only about five are considered safe for clinical trials and just one gains regulatory approval.

Disease complexity, stricter regulations and difficulties in patient recruitment have further extended development timelines, inflating research and development (R&D) costs. These delays also reduce the window of patent protection, which lasts 20 to 25 years in major markets such as the United States, Japan and China, giving companies less time to capitalise on their investments.

To offset these challenges, many pharmaceutical firms are turning to CROs and CDMOs. These partnerships can cut development time and significantly reduce R&D costs. Today, CROs and CDMOs are an essential part of new drug development and late-stage research. Particularly in China, where labour costs are lower, outsourcing has become a key strategy for managing rising costs and staying competitive.

A survey released in May by the Biotechnology Innovation Organisation found that 79 percent of responding US companies had at least one contract with China-based CROs or sourced products from China-based CDMOs. Unwinding these relationships could prove costly and time-consuming, potentially delaying the launch of new drugs and therapies.

Moreover, this decoupling could backfire, pushing China to accelerate its own indigenous innovation efforts. Beijing has already identified biotechnology as a strategic emerging industry in its 'Made in China 2025' plan, with ambitious goals to increase its global market share. Since June 2021, China has witnessed a robust investment landscape in the biotech sector.

The investments span a range of healthcare areas, including AI drug development, vaccine research and medical device platforms. Such investments suggest strong confidence and interest in China's biotech and healthcare industries despite an economic downturn that has weighed on biotech start-ups.

The biotech decoupling efforts come against the backdrop of uncertainty surrounding the renewal of the US-China Science and Technology Cooperation Agreement. This landmark pact, which has facilitated scientific collaboration between the two countries since 1979, expired at the end of August after a six-month extension failed to produce a breakthrough.

Attempts to negotiate a longer-term renewal have been marked by delays and complications. An article from Nature earlier this month suggested signs pointed to an eventual renewal, albeit with a more limited scope that restricts collaboration in competitive areas such as quantum computing, AI and advanced semiconductors.

As the Biosecure Act moves to the Senate, the biotech industry is watching with bated breath. Will biotechnology be the latest battleground in the ongoing technological rivalry between the US and China?

The outcome is likely to shape the future of global life sciences R&D. Whether this decoupling will enhance or hinder innovation in the long run remains to be seen, but one thing is clear: the era of unfettered US-China collaboration in science and technology is coming to an end. Biotech decoupling reflects a broader trend of techno-nationalism, where countries increasingly view scientific and technological progress through the lens of national security and economic competitiveness.

For multinational pharmaceutical companies, navigating this new reality will require careful strategic planning. Some are already exploring ways to diversify their supply chains and research partnerships beyond China. However, completely abandoning the Chinese market is not a viable option for most firms.

The broader implications of this biotech decoupling extend beyond the immediate industry impacts. It signals a fundamental shift in the global scientific landscape, where geopolitical considerations increasingly shape research priorities and collaborations. This trend could potentially slow the pace of global scientific advancement, particularly in areas that require large-scale international cooperation.

As the US and China increasingly view scientific and technological cooperation through a national security lens, the global research landscape risks becoming fragmented. With countries increasingly viewing technological leadership as a zero-sum game, the risk of a fragmented global innovation ecosystem is growing.

As policymakers grapple with these complex issues, striking a balance between national security concerns and the benefits of international scientific collaboration will be crucial. The outcome of this balancing act is likely to shape the future of global innovation and technological progress for decades to come.

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