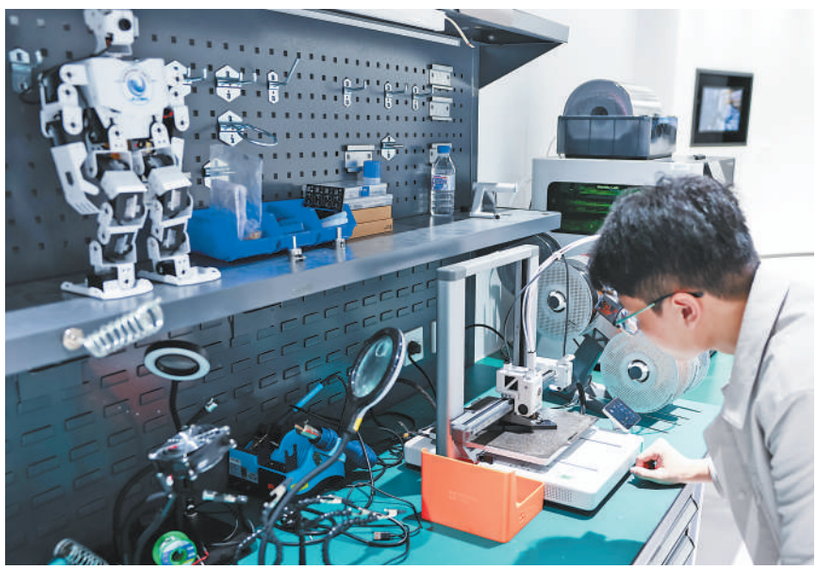
U.S. Curbs on China Investments Put Biotech Innovation at Risk

Clear Voice

By LIANG Yilian & ZHANG Mengran



A member of a bionic embodied intelligent robot team checks the 3D printing status of a component at a bionic robot innovation center in Changchun, northeast China's Jilin province, Sept. 7, 2026. (PHOTO: XINHUA)

The United States is moving to broaden its restrictions on investment in China. In a notice of proposed rulemaking (NPRM) released by the U.S. Department of the Treasury, biotechnology has been added to the scope of outbound investment restrictions, alongside semiconductors, AI, quantum information technologies, high- performance computing and hypersonic systems. The public comment period is due December 7, 2026.

The move marks further expansion of Washington's efforts to curb China's technological development, extending beyond export controls and entity-list restrictions to cross- border capital flows, and now reaching into the life sciences, a field closely tied to human health.

Washington continues to justify the expansion on "national security" grounds. Bringing cutting- edge fields such as biological sequencing, biomanufacturing, laboratory automation, brain-computer interfaces and bioinformatics tools under scrutiny, the proposed rule treats certain biotechnology activities as potential "dual- use" technologies. It assumes that U.S. capital flowing into relevant Chinese companies could translate into strategic advantages for China, and seeks to erect a financial firewall to prevent that outcome.

Every country has a legitimate right to protect its national security, but restrictions must be grounded in demonstrable risks. If broad claims alone can justify the continual expansion of restricted technologies and industries, the question is whether such measures genuinely safeguard security or simply use security as a pretext to shut out competition.

Biotechnology and biopharmaceuticals have an inherently global dimension; as global public goods, they deliver wide benefits. Drug discovery, infectious disease prevention and control, treatments for rare diseases, and breakthroughs in basic life sciences are endeavors no country can pursue in isolation. Cross- border flows of capital, laboratory expertise and clinical research resources have been important drivers of pharmaceutical innovation over recent decades.

The Chinese and U.S. biopharmaceutical industries are deeply interconnected. China has developed extensive active pharmaceutical ingredient supply chains, large- scale clinical research capabilities and cost- efficient R&D systems. U.S. pharmaceutical companies and venture capital firms hold substantial portfolios of drug targets and patents and have established commercialization channels. Licensing agreements and joint research and development projects have helped bring treatments to patients worldwide. If the proposed restrictions take effect, they risk disrupting this interconnected innovation chain.

This is precisely why U.S. industry itself has voiced its opposition. The Biotechnology Innovation Organization and other institutions warned that an overly broad approach could create uncertainty for innovators and investors and risk weakening U.S. biotechnology competitiveness. Consumer advocacy groups worry that obstructing cross- border R&D capital will delay new drug launches and raise drug costs, with American patients ultimately bearing the price.

Michael Becker, director of health policy at the American Action Forum, said the biotechnology provisions in the proposed rule "offer little justification for treating ordinary pharmaceutical development as a prohibited technology."

Even if Washington succeeds in restricting capital flows, will that necessarily deliver the technological advantage it seeks? The Information Technology and Innovation Foundation argued in an October 2025 report that sanctions often hurt U.S. competitiveness more. Technological competition depends on innovation capacity, industrial foundations, and talent accumulation — conditions that administrative restrictions cannot substitute for. The U.S. would be better off strengthening its own industrial competitiveness rather than ignoring the laws of competition and hoping to preserve advantage by restricting investment.

China has expressed serious concern and firm opposition to the proposed rules. A Ministry of Commerce spokesperson called the measures a "discriminatory expansion that politicizes economic ties and undermines global trade order."

Science knows no borders, and the mission of the life sciences is to protect human health. Countries should allow knowledge, capital, and clinical resources to flow more smoothly, rather than drawing lines by nationality and erecting barriers to cooperation.

Attempts to build walls through capital controls and block other countries' technological development will ultimately damage one's own innovation ecosystem, curtail market opportunities, and raise the institutional costs of global scientific and technological cooperation. Promoting innovation through openness and enhancing well-being through cooperation is the right path for the life sciences. It is also the rationality and vision that major powers should not lose in competition.

Voice of the World

China's Progress in Sustainable Development Inspiration for the World

Edited by QI Liming

This year marks the 30th anniversary of China's eastern-western poverty alleviation cooperation when the major cities in east China started dispatching teams to remote areas in the west, bringing talent and expertise, while their business communities invested and established enterprises, engaging in technological collaboration.

This approach goes beyond the traditional poverty alleviation path that relies solely on external aid. It does not view the impoverished as passive beneficiaries but leverages institutional and regional collaboration to create broad synergy and stimulate internal drivers of development.

This collaborative development concept has significant reference value for global poverty reduction. Foreign scholars, politicians and envoys praised the achievements of the 30- year collaboration and expressed their willingness to play a bridging role in various fields of cooperation and exchanges.

Robert Walker, honorary fellow of Green Templeton College, Oxford University, said since 1949, China has achieved an unprecedented historical leap in human development, evolving into a middle- high income country and moving toward the ranks of high- income countries. This has been a remarkable achievement in economy, technology, the establishment of social security systems, and public perception.

Walker said China achieved the poverty reduction targets set by the United Nations' 2030 Agenda for Sustainable Development 10 years ahead of schedule, accelerating the international poverty reduction process. The valuable experience is worth studying and learning from. Effective global poverty reduction cooperation listens to the voices of all parties and integrates the experiences and wisdom of the countries in the Global South.

Vijay Prashad, executive director of Tricontinental: Institute for Social Research, a network of research institutes in the Global South, said China's historic achievements in eradicating absolute poverty and the value of realizing whole-process people's democracy should be given great importance. "We should promote mutual learning of experiences and cultural exchange among the Global South, and jointly move forward toward the goal of enhancing the well-being of humanity," he said.

Solly Mapaila, general secretary of the South African Communist Party, said the ultimate goal of China's development is to improve people's livelihood: "In China, I have witnessed this. I visited rural areas in Jiangxi (in eastern China) and saw the crucial role played by local grassroots (Communist) Party (of China) organizations in the process of achieving poverty alleviation and transformation."

Mapaila said what is particularly important is that the people have been fully mobilized and become active agents in improving their lives, rather than merely passively accepting assistance. "This has greatly inspired us," he remarked.

Tunisian Ambassador to China Adel Elarbi marveled that "in China, whenever you visit a new place, you will have new experiences and new discoveries." He said China has numerous development stories and experiences that are worthy of being told and shared and his country looks forward to strengthening exchanges and deepening cooperation with China, and exploring more development opportunities in the "dynamic practice" of Chinese- style modernization.

Top Journals Are Not Built in a Day

Opinion

By LI Linxu

According to the *2025 Journal Citation Reports*, 27 of the world's top 50 journals by Journal Impact Factor were published by Springer Nature. That concentration of excellence invites an obvious question: What does it take to cultivate a journal that reaches the top?

Harsh Jegadeesan, Springer Nature's chief publishing officer, has a disarmingly simple answer. He once asked his predecessors the same question, and the reply was: "There is no overnight success." The company's more than 180 years heritage matters, but heritage alone does not explain the outcome. The formula, Jegadeesan said, rests on three persistent imperatives: continuously publishing high-quality papers, continuously attracting high-quality researchers to submit their work, and continuously building high-quality channels for academic dissemination.

The numbers show what that persistence looks like in practice. In 2025, Springer Nature received 3.1 million submissions of scientific manuscripts, a significant increase over 2024. Of the 539,000 primary research articles it published, more than 53 percent were open access.

It published many significant research papers across a wide range of subjects, including the first AI large language model to undergo peer review, a new wearable system to assist navigation for the blind and partially sighted people, and a digital map of the Roman Empire's road network.

Sustaining quality at that scale, Jegadeesan insists, "is not easy" and requires constant innovation. On two of the most closely watched issues in publishing today — AI policy and open access — Springer Nature was among the first publishers to test the waters. First-mover experimentation carries risk, but it also shapes the standards that others later follow.

For Chinese journals seeking to become top journals, Jegadeesan's advice is unambiguous. From the very first issue, they should think long- term: root themselves in local research strengths, and build with a global vision and a global network of collaborators. A truly top- tier academic journal is by definition global.

Equally important is a sustainable business model. Springer Nature's evolution — from a single subscription model to a mix of subscriptions and open access, and transformative agreements — demonstrates that commercial sustainability is indispensable to building top journals.

In 2025, Springer Nature's revenue reached 1.9 billion EUR with an underlying revenue growth of 6.2 percent. The strong financial performance supported its continued investment in technology and talent, lifting its total investment in these areas since 2021 to 188 million EUR.



Chinese "bamboo grass" has successfully been introduced across the mountains and seas and settled on the African continent. (PHOTO: XINHUA)

Chinese Skills Power Indonesia's Green Transition

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During peak construction time, the project employed about 800 to 1,000 workers. After completion, the on- site workforce decreased but daily operation, equipment overhaul, and maintenance of the station still require local employees, creating an opportunity for them to work in the new energy sector.

An Indonesian safety supervisor who once worked with Chinese technicians said although they sometimes needed translators to communicate, Chinese employees and managers were willing to share their experience and help local employees improve their skills.

Developing solar energy helps reduce dependence on traditional energy sources such as coal. He hopes Indonesia will build similar projects in the future to better utilize its abundant solar resources.

Beyond green electricity, technical exchanges and talent cultivation are also outcomes of the project. Through technical cooperation, Chinese enterprises help local employees improve their skills, adding momentum to Indonesia's clean energy development and green transition.

2026 WYSS: Youth at the Center of AI Era Science

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Renewal and growth

Several major initiatives were launched to empower young researchers, including the WYSS Journal Partnership Program, the Global Young Scientists Innovation and Entrepreneurship Growth Support Program (2026), the Global Young Scientist Pioneers Under 35 List, and the 2026 Young Scientist Sustainable Development Goals Award.

The Report on the Distribution and Mobility of Young Scientists in Embodied Intelligence, compiled by the Institute of Scientific and Technical Information of China, mapped global scientific talent. Drawing on a sample of about 1,800 scientists, it shone the light on a demographic with a median age of 34. Furthermore, nearly 70 percent of these researchers have experienced cross- regional mobility, demonstrating strong integration across academia and industry.

Reimagining education in AI era

With a highly mobile and youthful workforce, how to educate and train the next generation in the age of AI has become a pressing question. Efim Zelmanov, Fields medalist and chair professor at the Southern University of Science and Technology, China, advised young scientists to "listen respectfully to what your teachers say, but make your own decisions." He also urged them to be ambitious: "If the logic of your research brings you to a big problem, take it as an opportunity."

While acknowledging that AI unleashes unprecedented productivity, Zelmanov warned against the risks of over-reliance. "The AI revolution cannot slow down, but you have to pay increased attention to safety," he cautioned. He firmly believes that technology cannot replace human connection in education: "AI is a powerful tool in the hands of a good teacher. But AI cannot replace the teacher."

Driving sustainable development

Early-career researchers took center stage at the summit, accounting for 88 percent of participants. The 2026 Young Scientist Sustainable Development Goals Award was presented to four recipients from China and abroad. Two international awardees shared their research and reflections on the flash-talk stage.

Nicola Segata, professor at the University of Trento, Italy, who was recognized for applying computational methods to study the human microbiome, emphasized that modern science is "fundamentally a collaborative effort, so I really need to share the milestones with the members of my group, my international collaborators." "Understanding this microscopic world inside us is essential to achieving our macroscopic goals," he added, "particularly in fostering sustainable food systems and increasing the well- being of populations worldwide."

Cesar de la Fuente, associate professor at the University of Pennsylvania, USA, was honored for using AI to accelerate the discovery of new antibiotics. "Our AI systems have vastly accelerated our ability to come up with new molecules that allow us to combat currently untreatable infections," he said. He credited his multidisciplinary team of computer scientists, engineers, biologists, and chemists for pushing the boundaries of knowledge. "There's still a lot of work ahead and this recognition only gives us more confidence to chart forward," he added.

Deepening Integration of Sci-tech & Industrial Innovation

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The guideline encourages enterprise- led integrated innovation. Support for high- tech enterprises and specialized and sophisticated "little giant" enterprises will be scaled up. It calls on enterprises to jointly build R&D institutions and launch joint research projects with universities and research institutes.

Reform pilots for deeper integration will be rolled out in international sci-tech innovation centers, regional sci-tech innovation centers and eligible localities. Special initiatives will be launched to unlock industrial innovation vitality and foster dynamic innovation-driven cities.