



Opening Statement of Research and Technology Subcommittee Chairman Jay Obernolte

Joint Research & Technology and Energy Subcommittee Hearing
Pursuing the Golden Age of Innovation: Strategic Priorities in Biotechnology
June 5, 2025

Good morning. Welcome to this joint Research and Technology and Energy Subcommittee hearing titled “Pursuing the Golden Age of Innovation: Strategic Priorities in Biotechnology.” I look forward to engaging with our distinguished panel of witnesses on this critically important topic.

Since Mendel’s first experiments with pea plants laid the foundation for our understanding of genetics, humans have been using biological principles to advance society and technology. From healthcare to materials to food production, biotechnology influences every industry.

Throughout the twentieth century, the United States dominated the field of biotechnology. In fact, modern biotechnology is an American innovation. U.S. scientists consistently produce breakthrough innovations, solidifying our position as a global leader.

However, the Chinese Communist Party (CCP) is closing the gap. Our Chinese competitors seek to dominate the field and force global dependence on their manufacturing capabilities. In just five years, the market value of Chinese biotechnology firms has increased 100-fold and is now valued at \$300 billion.

The Golden Age of Innovation for biotechnology is here, and it is essential that the U.S. be at the forefront. With the help of artificial intelligence (AI), researchers are beginning to decipher the patterns that govern the complex behavior of biological systems.

The tremendous modeling power of AI will allow for the direct programming of cells to perform specific functions, just as we program computers. Imagine the potential applications of AI models fluent in DNA and biological molecules in the same way that large language models are fluent in human languages.

AI is poised to revolutionize biotechnology, accelerating discovery and dramatically reducing research costs. However, to unlock this potential we must invest in the fundamental research and development (R&D) that will drive the innovations of tomorrow.

In an address earlier this year, Michael Kratsios, the Director of the White House Office of Science and Technology Policy, recognized biotechnology as a national science priority. I agree with the Director – the government must enable American scientists to explore new theories and empower engineers to commercialize technology.

However, federal investments alone cannot achieve this goal, and the U.S. must capitalize on its strengths. One such strength of our domestic science and technology enterprise is public-private partnerships.

The federal government must coordinate with private industry to make complementary investments that advance science and technology. In our current fiscal environment, we need to prioritize investments to protect the precious public treasure entrusted to us.

In April, the National Security Commission on Emerging Biotechnology (NSCEB) released a report emphasizing the significance of maintaining U.S. global leadership. The report includes numerous recommendations for this Committee, which I look forward to discussing today.

Importantly, the report highlights the necessity of a whole-of-nation strategy to unlock America's biotechnology potential. The National Science Foundation (NSF) and the National Institute of Standards and Technology (NIST) are strategically positioned to promote this national effort.

For example, NSF has established five biofoundry facilities that enable researchers to rapidly design, create, test, and refine the development of tools and technology for advancing biotechnology. I was pleased to see the President's budget request includes continued support for these facilities.

The NSCEB report also calls for NIST to create standards for biological data to ensure readiness for use in AI models. This recommendation builds on NIST's existing activities, which already provide reference materials for quality control, benchmarking data, and technical advice for U.S. and international standards development.

Additionally, the NIST biomanufacturing program supports the U.S. pharmaceutical industry in delivering high-quality and low-cost drugs worldwide, including through the National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL).

Federal investments can be a force multiplier that reinvigorates our biotechnology research ecosystem and guarantees U.S. leadership for decades to come.

Whatever strategy Congress adopts, it must promote and protect American values while being flexible enough to adapt and pivot to take advantage of new technological advancements. I believe the U.S. can continue its leadership in biotechnology, but we must act now.

I want to thank our witnesses for being here today. I look forward to your testimony and a productive discussion on this critically important topic.