

# Is Sino–American Scientific Collaboration a Thing of the Past?

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Scientific exchanges enhance humankind. Thus, a major component of Sino–US rapprochement after 1978 was academic and scholarly exchanges, eventually leading to collaborative research. Such efforts have been lauded. In 2014, the president of the National Institutes of Health (NIH), Francis Collins, speaking at Fudan University in Shanghai, said that “science has no borders because knowledge belongs to all humankind,” while an internal NIH review found that between 2010 and 2019, joint projects funded by NIH and the Chinese had produced several high-impact papers on cancer.

## So, What Went Wrong?

Changes in Chinese policy, the high level of cutting-edge technology that has gravitated to China, and shifts in the United States’ perceptions of its national security, ended this cozy relationship.

To benefit from its overseas talent, Chinese institutions, such as the ministry of education (MOE), the Chinese Academy of Sciences, and the Organization Department of the Chinese Communist Party (CCP), established programs to bring back the country’s best and brightest. However, as the very best scientists in the Chinese diaspora chose to stay abroad, both the MOE and the CCP offered part-time affiliations with Chinese universities, whereby these researchers maintained their jobs overseas and continued their research in Western laboratories. They also trained tens of thousands of Mainland PhD candidates and postdoctoral fellows who worked with them in their laboratories.

But around 2013, the CCP stopped publishing the names of part-time participants in its Thousand Talents Plan (TTP), taking the program underground. In 2018, the Trump administration’s *National Defense Strategy* labelled China a “strategic competitor” seeking global preeminence. Replacing inter-state strategic competition with terrorism as the primary concern of US national security securitized scientific collaboration.

## The China Initiative Targets Collaboration

Hence the Department of Justice (DOJ)’s “China Initiative.” Directed by the Federal Bureau of Investigation (FBI), it accused ethnic Chinese students, professors, scientific researchers, and commercial actors of being “non-traditional collectors” of intelligence. It also tried to delink US and Chinese academic and scientific cooperation. Thus, Collins’ statement cited above, heralding Sino–American collaboration, has been removed from the NIH website.

The impetus for this campaign came from the top, with President Trump accusing most Chinese students of being spies. The director of the FBI called for a “whole of society” defense against what he claimed was an unprecedented “whole of society” Chinese attack. At an April 2018 congressional hearing entitled “Scholars or Spies,” Congressman Lamar Smith accused China of planting “sleeper agents” in US universities to steal scientific breakthroughs.

## The NIH and the FBI Get to Work

The Trump administration employed two strategies. Granting agencies, particularly the NIH, pressured universities and laboratories to investigate their China-born researchers or face funding cuts. Some suspended Chinese faculty without strong cause in order to insure continued NIH funding. According to Dr. Epling-Burnette, who was fired from a major research institute for not disclosing her China connections, “these institutions live

### Abstract

A laudable component of Sino–US rapprochement after 1978 has been collaborative research. But China’s aggressive effort to benefit from its scientific diaspora, the cutting-edge technology that has gravitated to China from the United States, and America’s new perception of China as a “strategic competitor,” led the Trump administration to roll out the “China Initiative,” securitizing scientific collaboration. Despite a strong pushback from universities and Asian–American rights groups, this scientific cooperation remains at risk.

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in absolute fear of NIH and worry that, if they don't go overboard in taking action, NIH might cut them off." US granting agencies also toughened their guidelines concerning how institutions and individuals should report foreign funding and affiliations. Still, the NIH official leading these investigations admitted to the author that the total funding potentially misused by researchers tied to China was approximately 0.5 percent of all NIH funding available for institutions and individuals outside the NIH itself.

Second, the FBI pressured its 94 field offices to find spies. In an interview, then Assistant Attorney General John Demers admitted that the DOJ wanted each district to bring in one or two per year. The results were predictable. In the case of Dr. Anming Hu, who was fired from the University of Tennessee at Knoxville, the FBI agent who arrested Hu for spying admitted under oath that he had no proof to back his claims.

### **What Do You Do When You Have No Proof?**

The FBI and DOJ, often lacking such proof, have sought convictions and punishments for more minor offenses, such as lying to the FBI about participation in Chinese government programs (lying to the FBI is a criminal offense), or not fully disclosing to US granting agencies one's relations with Chinese institutions (which can lead to wire fraud). Without grants, graduate students, or even a job, many have returned to China, where they are often warmly welcomed. Yet, according to Rory Truex of Princeton University, with about 107,000 Chinese citizens working in STEM subjects at the graduate level or above, the criminality rate as of 2020 in this population is less than 1/10,000. In July of 2021, the DOJ dropped charges against nine Mainland-born academics who allegedly engaged in nefarious activity.

### **Defending America's Open Scientific Environment**

The chancellors of Stanford University, University of California–Berkeley, University of California–Davis, University of California–Los Angeles, the University of Michigan, Rice University, and others, have resisted these pressures. The president of MIT agreed to pay the legal defense for a senior researcher, Chen Gang. The Baylor College of Medicine did not fire staff who had not followed NIH policies on disclosure because these actions were "not serious enough to merit disciplinary action." Many have accused the DOJ of racial profiling, arguing that the belief that certain racial groups disproportionately commit certain crimes leads to conviction rates that appear to confirm those stereotypes. NIH and the National Aeronautics and Space Administration (NASA) have been accused of "moving the goal posts," so that past actions that were previously seen as positive suddenly become conspiratorial activity. Writing in *Science* in July 2019, Dr. Elias Zerhouni, former director of NIH, argued that "for years, scientific exchanges and collaborations with China were encouraged by US policymakers, including implicit support of China's Thousand Talents Program." Further, he argued, as federally funded scientists took positions in China, the United States did not object. Finally, the "rules," now presented and enforced as severe violations of US ethics and intellectual property regulations, were not rigorously implemented by many US institutions. Even the US Government Accountability Office admitted in December 2020 that the goal posts were moved.

### **The Risks of the China Initiative**

The risks of the China Initiative are numerous. At a personal level, life has become deeply uncomfortable for Mainland-born scientists and academics working in the United States, many of whom cherished America's open scientific culture. Second, their productivity has made China America's largest collaborator since 2011. In fact, in terms of articles published in high impact journals, such as *Nature* or *Science*, China has shared a higher percentage of its research with the United States than vice versa. Still, the percentage of the US high-technology research shared with China has continuously increased over the past 10 years, while the percentage of high tech created in China that has been shared with the United States has been relatively stable.

Third, most TTP awardees in the United States are among the best Chinese researchers in the world, so the United States would lose a significant component of its

research strength should this group be chased back to China. Fourth, if STEM students, blocked from the United States, go to Europe or Japan, they are more likely to return to China than wind up working for US companies or universities. Fifth, collaborative research with a top cancer research country could end. Finally, according to ProPublica, investigations and prosecutions of scientists for nondisclosure, a violation previously handled within universities and often regarded as minor, is “helping China achieve a long-frustrated goal of luring back top scientific talent.”

What can be done? Writing in 2014 in the *Bulletin of the Atomic Scientists* on the issue of scientific openness versus national security, Krige quoted a US government report of 2007 that argued that the only reasonable security policy is to protect only the most sensitive knowledge by building *high walls around small fields* rather than trying to build *nominal walls around large fields*. Thus the Department of Energy, which is responsible for the US nuclear program, was unwise to let nine Mainland-born Chinese researchers in the department join the TTP. On the other hand, the Biden administration must be judicious in pursuing policies that undermine global cooperation and the advancement of scientific and academic research. ▲

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