Analysis of May 2025 Senate Small Business Committee Report on Chinese Influence Risk in SBIR/STTR

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INTRODUCTION

The recent paper from the Senate Committee on Small Business and Entrepreneurship on Chinese infiltration of the SBIR program takes on an important topic. There is ample evidence that Chinese entities have sought to benefit from U.S. innovation programs for more than a decade, through recruitment of U.S. researchers, planting Chinese researchers with CCP ties in universities and U.S. companies, and sometimes through straightforward espionage. It would be very surprising if this large-scale effort had somehow avoided the SBIR program altogether, and a detailed DOD report in 2021 identified six primary pathways through which Chinese entities seek to acquire SBIR technology.

However, the analysis offered in the Senate paper only illustrates the difficulties in pinning down this infiltration with any rigor, and also illuminates ways in which this very real challenge can be used for other purposes. The paper's attack on multiple award winners (MAWS) depends entirely on a handful of case studies, and while this approach can help flesh out an argument, the bones must be there in the form of data. This analysis offers no data of any consequence related to MAWs.

Worse still, the cases presented in the paper are themselves both cherrypicked and remarkably unconvincing. The paper aims to show that multiple award winners (MAWs) are particularly susceptible to Chinese infiltration, arguing that 6 of the top 25 award winners are tainted. However, under more detailed and unbiased examination, each of the cases dissolves into tenuous linkages, in some cases dating back many years, and often focused on a single award out of hundreds. In all six cases, it turns out that there are no relevant Chinese connections.

Overall, there is no evidence at all of technology transfer to China from SBIR-funding at these six companies. None.

ASSESSING THE DOD REPORT.[1]

The Senate paper leans heavily on a 2021 DOD Report, which uses seven case studies of SBIR firms with apparent Chinese connections (plus two ancillary cases) to draw out a set of mechanisms or pathways used by China to transfer technology from U.S. SBIR companies to China (see box). This analysis is useful, and the pathways the paper identifies are important. However, only one of the case studies concerns a company in the top 25 multiple award winners (MAWs): The DOD report claims that one Lynntech researcher returned to China, and continues to collaborate in some unspecified way with one senior researcher at Lynntech. No further evidence of technology transfer is provided, no claim of malfeasance is offered, five of the six mechanisms for transfer defined by the DOD report are absent, and the case study concludes with the remarkable vague statement that "the former employee's selection into a PRC talent program and research collaboration with Lynntech runs the risk of state-directed technology or knowhow transfers that can affect Lynntech and DoD equities." A more detailed analysis of this claim is provided in the section on Lynntech below.

Aside from the Lynntech case study, the 2021 DOD report otherwise does not explore possible links between MAWs and China.

DOD Report: Key Technology Transfer Pathways to China

• Key employees of US firms receiving SBIR funding are recruited via a PRC state-sponsored talent program and relocate to China but continue research collaboration with officers of the US company where they were previously employed.

• Founders of US startups that obtained US government research funding dissolve US business(es) and return to China under PRC recruitment programs and continue their research at institutions that support PRC defense R&D.

• US firms establish PRC-based subsidiaries, and in some cases, later dissolve US operations and subsequently receive PRC government investments.

• US firms receive venture capital funding from Chinese sources, including state-owned enterprises that present foreign ownership, control, or influence risks.

• US firms partner with or sell products and services to PRC entities that support its defense R&D and industrial base.

• PRC researchers have conducted detailed analyses of US Navy SBIR programs over time to identify DOD technology development priorities and catalogue firms that receive the most SBIR funding.

ASSESSING THE SENATE SMALL BUSINESS REPORT[2]

The headline claim from the Senate report is that "six out of the top 25 multiple award winners had problematic relationships with foreign adversaries" while participating in the SBIR program. This claim requires a detailed review.

To begin with, 6 out of 25 is less than 25 percent. Given the difficulties on engaging with and in China, it is not surprising that most MAWs have no such ties, according to the Senate paper. However, on closer examination, the China links claimed by the Senate paper for each of these companies largely dissolve. The bullets below offer the claim from the Senate paper, along with our analysis and a rebuttal based on information from the companies concerned (Ernst concerns are highlighted in red).

1) **Luna Innovations** has a "designated agent and technical service center" in Guangdong, operated as a joint venture, and covering the services of its products in the Pacific Rim.

   This is not a research enterprise. The joint venture services Luna Innovations products in the Pacific Rim region. This is the same relationship utilized by most U.S. companies operating in the region: find a local partner to service a local market. There is no evidence of any technology transfer from SBIR-funded projects.

2) The paper raises three separate concerns about **Triton Systems:** A) The CEO was in 2020 appointed a non-executive director of CITIC Capital Acquisition (CCA), which the paper states is an entity sponsored by the Chinese government. B) A Triton spinoff (FRX Polymers) developed and manufactures flame retardants. FRX had received investment from CITIC Capital, and in 2019 started a joint venture with a Chinese company to produce flame retardants. C) A separate

spinoff company, Aduro Biotech, merged with Chinook which then formed a JV with a Chinese company.

The claim that there may be technology transfer to China here fails for multiple reasons:

A) The former CEO was a non-executive independent director at CCA. CCA itself was at the time a U.S. company traded on the NYSE. Per NYSE rules an independent director is one who the board of directors affirmatively determines has no material relationship with the company (section 303A.02(a)(i), NYSE Listed Company Manual). Further, more than 80% of its shares were held by institutional investors. It has since merged with another U.S. company focused on homeland security. CFIUS determined that no review of this deal was required.

B) FRX Polymers (now known as Nofia Solutions) sells only commercial additives into the global consumer electronics, textiles, and automotive markets. It has no specifically defense-related products. Triton has not licensed or transferred any technology derived from SBIR funding to FRX. Further, FRX engaged a Chinese company in a sales agreement, not a joint venture, per the reference cited in the report. This is standard for firms selling products in China.

C) Aduro Biotech. Triton spun off Triton Biosystems in 2001. It became Aduro Biotech through a merger in 2008, and was publicly listed in 2015. In 2020, it merged with Chinook Technologies, after Triton had sold all its shares in Aduro. At that point, Triton had no financial, programmatic or intellectual property affiliation with Chinook. The technology that Aduro commercialized was a completely different cancer treatment to that originally developed by Triton, and no SBIR-related technology was transferred during the Chinook merger.

In short, the former CEO was a nonexecutive independent director on a company that was publicly listed on the NYSE and was more than 80% institutionally owned; the company merged with another U.S. company in a transaction that did not trigger a CFIUS review. FRX Polymers works only in non-defense markets, and has not had access to any of Triton's SBIR-derived technology. Triton ended its connection with Aduro before the 2021 merger with Chinook, and in any event none of Triton's SBIR-related technology was transferred to Chinook (which in any case is not a defense-oriented company).

As with other companies in this paper, Triton has been at considerable pains to point out that it complies meticulously with Federal disclosure and governance rules. It files form SF328 regularly with DCSA, and also voluntarily provides additional information about foreign contacts to OCEA at the Air Force, the designated lead within DOD for screening foreign affiliation risks. OCEA has raised no concerns with Triton, and neither has DCSA.

3) **Lynntech. The 2021 DOD report** claims that one Lynntech researcher returned to China, and continues to collaborate in some unspecified way with one senior researcher at Lynntech

Following publication of the Senate paper, Lynntech completed an extensive audit of the relevant employee's activities. It found that:

- The employee was employed by Lynntech for 2½ years, ending in April 2011. He held a U.S. green card at the time, and his employment fully complied with all applicable federal hiring and export control requirements.
- Prior to Lynntech, he was employed by a federally funded institution–Lawrence Berkeley National Laboratory.
- After leaving Lynntech, he remained in the United States and worked for more than 6 years at the University of Texas at Austin, and Indiana University – Purdue University Indianapolis.
- He returned to China more than six years after leaving Lynntech.
- Lynntech found, via a comprehensive IT audit, no communication between any current employees and the employee, and no ongoing relationship with current Lynntech personnel.
- Federal counterintelligence agencies, including the Defense Counterintelligence and Security Agency (DCSA) and the FBI, were contacted directly. Both agencies confirmed that no national security concerns were identified involving Lynntech or any of its employees.

In short, a Chinese national who had previously worked at Federally funded jobs was hired and worked for Lynntech for 2½ years. He then went on to work at other Federally funded institutions. Six years after leaving Lynntech, he returned to China. Lynntech had no communication with him after he left, and DOD confirms that there are no security flags in this case. There is no evidence of technology transfer from SBIR-funded projects.

4) **TDA** is alleged to have undertaken joint research with Sinopec, a Chinese company.

According to TDA, TDA's only involvement with China was via a Department of Energy (DOE) contract to demonstrate a Carbon Capture Technology that captures CO2 from a coal gasifier. The project ran from 2013 through 2022, and the final demonstration was run at the Sinopec Yangtze Chemical plant in 2019. TDA did not provide any Intellectual Property to Sinopec, did not license the process to Sinopec, and the only data Sinopec received is the data in TDA's project reports which are publicly available from the DOE. TDA has had no contact with Sinopec since the experimental unit was shipped back to the US and the project closed down. In short, TDA has provided no licenses, technology or non-public information to any Chinese entity, and has no ongoing relationship with any Chinese entity.

Once again, the Senate paper references a single project out of hundreds at TDA. The project was neither an SBIR project or a DOD project, it was a DOE Demonstration project funded directly by DOE Fossil Energy Research and Development. Likewise, the demonstration collaboration and demonstration site were specifically reviewed, approved and closely monitored DOE. The project itself is non-classified and public reports are available via DOE, while TDA itself has no current contacts with Chinese entities, including Sinopec. There is no evidence of any technology transfer to China from SBIR-funded projects, or from this project.

5) **Kitware**. Kitware has sold products to two Chinese defense-related universities, and has conducted joint research at another Chinese university.

According to Kitware, the company collaborated with the National Library of Medicine (NLM) and five other organizations to develop the Insight Segmentation and Registration Toolkit (ITK). The blog post referenced in the Senate report in footnote 28 was written in 2012 by a then-Kitware employee and ITK contributor about the growing popularity of ITK in China. None of the organizations mentioned in the post were or are customers of Kitware, and the interactions this employee had with Chinese universities were during a personal trip. Those interactions exclusively involved the open source ITK platform, which the NLM made freely available to all under a BSD license.

The publication referenced in footnote 29 is the result of an external collaboration by the researcher, and the work covered by the publication was not performed at Kitware. In accordance with Kitware policies, the employee's participation in that external publication was reviewed by its compliance team to ensure no restricted information was shared and no other security risks created. Kitware does not have a contractual or financial relationship with any of the co-authors or their organizations.

In short, Kitware has no Chinese customers or partners, and has helped build an open source collaborate software platform that is freely (and widely) distributed by the National Library of Medicine. Individual researchers have collaborations on other non-Kitware projects, which are approved only after review for security issues. There is no evidence of any technology transfer to China from SBIR-funded projects.

6) **NanoSonic**. One NanoSonic STTR award utilized Chinese national researchers (in the United States). These researchers were also funded by Chinese research institutes.

According to NanoSonic, The Senate paper citation relates to an STTR project, under which NanoSonic worked with a group of researchers with expertise in a specific type of solar cells, at Pennsylvania State University (PSU). One of the students on the PSU team had received prior awards from organizations in China for his prior research work. The AMRDEC STTR Program Coordinator (PC) and STTR Contracting Officer Representative (COR) determined with certainty that the tasks being performed by PSU were fundamental research and did not involve ITAR technology. Additionally, the PC and COR waived the Foreign Nationals, Public Release of Information, and Disclosure of Information restriction clauses for PSU in this case, which meant that the Chinese student was allowed to work on this contract.

In reality, the single research award (out of hundreds won by NanoSonic) included a single Chinese student researcher who had also been previously funded by a Chinese institution. The work itself did not fall under ITAR. There is no evidence of any technology transfer to China from SBIR-funded projects.

CONCLUSIONS

The 2021 DOD report provides a valuable framework for considering the pathways through which SBIR-funded technologies might be acquired by China-backed enterprises. Applying that framework to the six case studies in the Senate report, we find

- Zero cases in which key employees were recruited from SBIR companies via PRC state-sponsored talent program.
- Zero cases in which a U.S. SBIR-funded startup dissolved and reconstituted in China.
- Zero cases in which U.S. companies set up Chinese subsidiaries and later dissolved the parent corporation.
- Zero cases in which an SBIR firm received venture funding from Chinese entities.
- Zero cases involving potential sales to defense-related entities in China.
- No SBIR companies are responsible for PRC reviews and assessments of SBIR awards, so this channel is not relevant to the current discussion.

To summarize, none of the six companies listed in the Senate paper meet a single one of the criteria for PRC influence defined by the 2021 DOD Report.

Overall, the Senate paper grossly overstates the relationship between these companies and China. Even after cherry-picking individual projects out of the hundreds of projects run by these companies, the Senate paper can only make vague accusations without providing hard evidence of a pathway to technology transfer, let alone any actual transfer. For all six companies in the Senate paper, not a single one of the six technology transfer mechanisms defined by the 2021 DOD report can be applied. All also appear to fully comply with existing China-related regulations.

The old saying is that there is no smoke without fire, and the Senate paper has certainly provided plenty of smoke – but no evidence at all of a fire. This detailed analysis shows conclusively that for the six companies referenced in the Senate paper, there is not even a shadow of a concern about SBIR-China linkages. Claims to the contrary simply do not hold up to careful and unbiased review. As a result, there is no evidence whatsoever that MAWs are in any way more likely to be at risk; on the contrary, small poorly-funded companies seem much more likely to be vulnerable.

[1] Protecting the National Security Innovation Base Study Group and OSE/Factor 8 Program, “Survey of PRC State-Sponsored Technology Transfers Affecting SBIR Programs: A DoD Case Study,” April 21 2021.

[2] U.S. Senate Committee on Small Business and Entrepreneurship, “Critical American Technology Vulnerable to China” May 2025.