

Executive Summary



Uphold existing protocols

Step 1: Remind faculty and staff to:

- A. Be diligent in completing the Vanderbilt annual COI disclosure, and to scrupulously include any potential conflicts from sponsorship by international sources.
- B. Be diligent and exhaustive when completing the “other support” section of NIH proposals.
- C. Refer to the VEC best practices for export compliance and travel provided in the online portal.
- D. Raise awareness of national security concerns, especially for those in dual use STEM research areas.



Create new protections

Step 2: Coordinate with deans, Office of the General Counsel, Associate Provost for Academic Initiatives, and Interim Vice Provost for Faculty Affairs to:

- A. Establish a process for reviewing all existing and forthcoming research-related Memorandums of Understanding (MOUs) with international agencies, with a particular focus on China, Iran, and Russia, through Vice Provost for Research Padma Raghavan.
- B. Establish a process for reviewing all existing and forthcoming non-research-related MOUs with international agencies, with a particular focus on China, Iran, and Russia, through Associate Provost for Academic Initiatives Dawn Turton.



Shape the future conversation

Step 3: Coordinate with Office of Federal Relations to:

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- B. Participate in forthcoming AAU survey about effective practices, tools, and resources used by member universities to protect against foreign security threats.
- C. Provide on-campus training and expand password-protected online resources for Vanderbilt faculty and staff starting Jan. 2019.



Protecting our Research, Intellectual Property,
and Technology:
Proactive Steps to Counteract Foreign Threats

Padma Raghavan
Vice Provost for Research

Oct. 30, 2018

Motivations

The Office of the Vice Provost for Research and the Office of Federal Relations at Vanderbilt have been tracking conversations about national security. Concerns in this area have increased over the past year to become a broad, bipartisan issue in U.S. government, academia, and business.

Congress

- Apr.-Jul. 2018: House and Senate hearings and statements voiced national security concerns about China.
- Jun.-Aug. 2018: Legislation, policy, and regulatory changes enacted against Chinese companies (i.e., Huawei and ZTE), including limitations on Dept. of Defense funding.

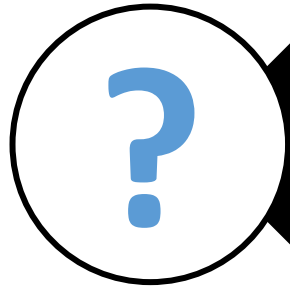
National Institutes of Health

- Aug. 2018: In letters to multiple AAU institutions, NIH Director Francis Collins raised concerns about:
- Intellectual property diversion to foreign countries
 - Unreported conflicts of interest involving foreign entities and governments

Federal Bureau of Investigation

- Feb. 2018: FBI Director warned Congress about national security risks involving graduate STEM programs.
- Sept. 2018: Chancellor Zeppos attended Science & Security meeting with 60 other ACE/AAU institutions at the FBI.
- Oct. 2018: FBI visited Vanderbilt to outline research-related espionage and intellectual property theft threats posed by foreign powers.

Overview



Understand the potential threats



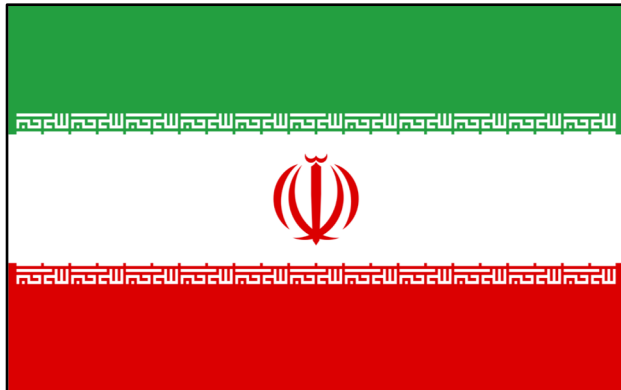
Review our current protective measures



Strengthen our protections further

Who is considered a potential threat to U.S. research?

China, Iran, and Russia are all flagged as foreign powers of national concern.
Of these, **China** is considered of greatest concern to entities like Vanderbilt.



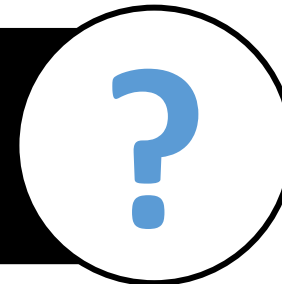
What exactly are the threats?

Chinese government and military accessing STEM research with dual use possibilities (e.g., biomedical research with applications for biological warfare).



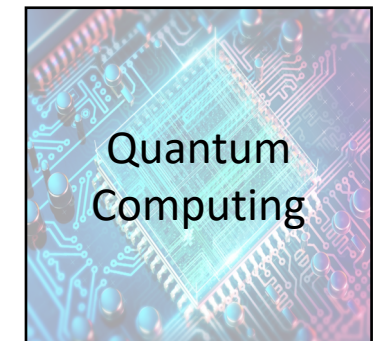
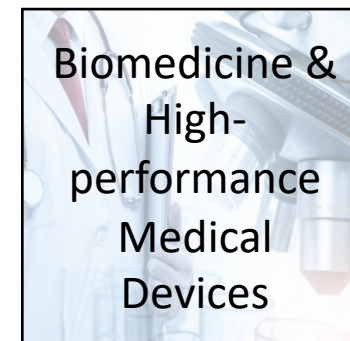
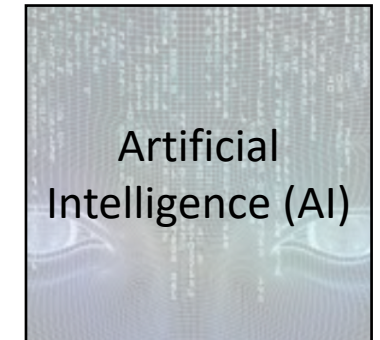
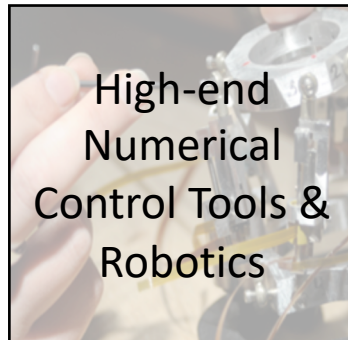
Chinese economic espionage and intellectual property theft of U.S. innovations prior to invention disclosure.

Chinese government and military benefitting from years of scientific research conducted in the U.S., including research funded by the U.S. government.



Which areas are under threat?

12 key sectors are highlighted as likely targets based on China's growth priorities and U.S. strengths.



How do threats manifest in research?

Chinese Talent Programs

Confucius Institutes, Thousand Talents Program, etc.



HOW IT WORKS:

Ethnic Chinese educated or employed at U.S. universities are recruited to transfer or replicate research and technology.

PROTECTIONS:

- Vanderbilt does not have a Confucius Institute

CAUTIONS:

- Faculty may be sponsored by Chinese programs like Thousand Talents without Vanderbilt's knowledge



Non-traditional Collectors

HOW IT WORKS:

Professors, scientists, and students at U.S. universities are used to transfer or replicate information for China.

PROTECTIONS:

- Conflict of interest (COI) disclosures reveal concerning collaborators or sources of funding

CAUTIONS:

- Often non-complicit
- May be recruited after leaving Vanderbilt

Threats in Research: Some Examples

- *WHO*: Chinese-American researcher
- *WHERE*: U.S. National Oceanic and Atmospheric Administration (NOAA)
- *WHAT*: Sentenced for entering into contractual agreements and accepting salary from 3 Chinese talent programs while already employed at NOAA.

- *WHO*: Chinese grad student
- *WHERE*: Duke University
- *WHAT*: Reputedly stole his mentor's intellectual property, including research related to a U.S. Dept. of Defense contract, and used it to create a mirror institute and multi-billion dollar metamaterials company in China.

- *WHO*: American professor
- *WHERE*: University of Tennessee
- *WHAT*: Sentenced for conspiracy after his failure to comply with export control laws led to his Chinese students illegally exporting sensitive information related to a U.S. Air Force contract to China.

- *WHO*: Chinese former graduate student and active U.S. Army reservist
- *WHERE*: Illinois Institute of Technology
- *WHAT*: Arrested for failing to disclose ties to the Chinese Ministry of State Security (MSS) and on allegations of secretly providing information about American defense contractors to the MSS.

Threats in Research: A Counterexample

- *WHO*: Chinese-American professor
- *WHERE*: Temple University
- *WHAT*: Falsely accused of economic espionage on an NSF grant involving Chinese research collaborators. It took several months and over \$200,000 in legal fees to clear his name.

Vanderbilt's Goal: Balance

Our Responsibilities

- Protecting our researchers and their work
- Complying with federal policy and regulations

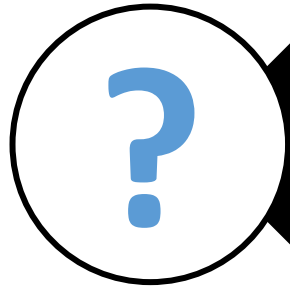
Our Mission

- Fostering path-breaking, collaborative cross-disciplinary research
- Building a diverse, inclusive community



Oct. 30, 2018

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How We Protect Ourselves Now

Sponsored Programs Administration (SPA) and Vanderbilt Export Control (VEC) screen sponsored relations with organizations in China.



SPA and VEC screen all new sponsors for denied party status before adding them to the proposal submission database.

SPA and VEC continuously track organizations identified as of national concern (e.g., Huawei) and advise schools not to accept awards from them.



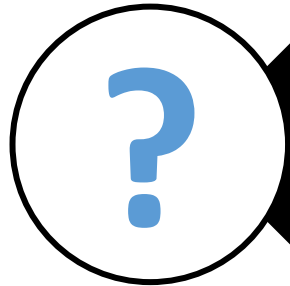
VEC provides best practices for export control and travel through an online portal available to all Vanderbilt faculty and staff.

Faculty are required to disclose any potential conflicts of interest in the annual Vanderbilt COI disclosure, which is reviewed by the Office of the General Counsel.



Faculty applying for NIH funding are required to report “other support”, which would include payment from a Chinese talent program, foreign company, etc.

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Protecting our cutting-edge research and technology is nothing new to Vanderbilt, but remaining vigilant and regularly updating our processes is key to our continued safety.

I ask for your help in upholding our existing protective measures, establishing new protocols, and socializing best practices with our faculty and staff.

Thank you!

Oct. 30, 2018