

Steps needed to keep immigrant scientists welcome

Experts discuss importance of foreign-born researchers at AAAS Annual Meeting

By **Becky Ham**

Restrictive immigration policies and new protections against foreign government influence on research have American scientists concerned about their ability to attract foreign talent to their laboratories and to collaborate with international colleagues, experts said in sessions throughout the American Association for the Advancement of Science's 2020 Annual Meeting.

At the meeting, held 13–16 February in Seattle, Washington, AAAS launched the Science Beyond Borders program to collect stories of immigrant scientists practicing and studying in the United States, to inform ongoing advocacy with the U.S. government and academic institutions to support foreign researchers.

The program, an initiative of the AAAS Center for Science Diplomacy and Office of Government Relations, grew out of concerns that travel restrictions, shortened visa stays and visa denials, and investigations into foreign researchers were having a negative effect on the U.S. research enterprise, said Joanne Padrón Carney, chief government relations officer at AAAS.

"While many people in government and at high levels at universities were engaged and speaking on the issues, we thought that the individual scientists, especially foreign nationals, did not have a voice," Carney said.

The scientists who have shared their stories with the program so far voice worries about "future collaborative opportunities...and some feel they are being perceived as not a good partner," said Carney. U.S. scientists are also weighing in with concerns about how the restrictions are affecting their workplace.

Support for the Science Beyond Borders program comes from Jan and Marica Vilcek and the Vilcek Foundation. Jan, a first-generation American microbiologist, wanted to help highlight the contributions of foreign researchers to American science. The funding also allows AAAS to participate in roundtable forums on the issue and share information on current and new policies with stakeholders such as universities. At the AAAS Annual Meeting, the program sponsored a town hall forum on balancing global science pursuits with national security policies.

At the town hall and in similar forums, "we are hearing, increasingly, about this becoming an issue, and how the rhetoric of this administration has departed from the rhetoric of past administrations," said Julia MacKenzie, senior director of international affairs and acting director of the AAAS Center for Science Diplomacy. "All of these feed into each other in a way that we are hearing is very much felt in the lab and at universities."

There is a "cumulative effect of having foreign-born scientists feel unwelcome if they are already here, or feel that they don't want to come, or to seek other options," she added.

Carney said the Science Beyond Borders program will continue as long as needed. "This project needs to have a long shelf life because we don't know what the long-term effect of these policies will be," she said.

The United States could soon feel the strain if international collaborations break down and the flow of immigrant scientists is restricted, said outgoing AAAS President Steven Chu in his plenary address at the start of the meeting.

Chu noted that 34% of all U.S. Nobel laureates have been immi-

grants to the United States—not to mention the second-generation laureates like himself. Among U.S. Fortune 500 companies, he said, 45% were founded by immigrants or their children, with familiar-sounding names like Jeff Bezos and Elon Musk.

For decades, "graduate students and postdocs from foreign countries came to study in the United States and stayed because we are a free, open, and accepting society," said Chu, the co-recipient of the 1997 Nobel Prize in Physics and U.S. Secretary of Energy from January 2009 to April 2013.

Recent attempts to restrict foreign student visas and efforts to limit collaboration with international scientists could have a chilling effect on future U.S. scientific and economic gains, Chu warned.

Rising concerns about research espionage and conflicts of interest have made some U.S. universities and labs reluctant to open their doors to foreign researchers. Chu and others at the meeting pointed to recent investigations of Chinese national researchers in U.S.

institutions by the Federal Bureau of Investigation and the U.S. National Institutes of Health, regarding possible intellectual property theft, improper reporting of funders, and biases in the peer review process. Jodi Black, the deputy director of the National Institutes of Health's Office of Extramural Research, said in the town hall event that her office is working on cases involving about 180 individual scientists.

White House Office of Science and Technology Policy Director Kelvin Droegemeier, also speaking at the town hall event, said that new guidelines for auditing federally funded research to address possible research security issues are forthcoming. As chair of the National Science and Technology Council, Droegemeier has been meeting with representatives from academia and industry through the NSTC's Joint Committee on the Research Envi-

ronment to find ways to strike a balance between open scientific discourse and national security.

"It's not about stigmatizing people from any particular race or country of origin...if you're part of our enterprise, we simply say, play by rules, because scholarly research demands that. It's a code of ethics that we sign up to," Droegemeier said.

In a press breakfast at the meeting, Chu said that "the vast majority of scientists are deeply ethical." But he agreed that work toward establishing a global culture of scientific ethics would be one way to reassure U.S. institutions and to encourage continued international partnerships.

The idea is not to force American scientific culture on other nations, said AAAS CEO Sudip Parikh, who also serves as the publisher of the *Science* family of journals. "I see the creativity and the energy and the vitality that's coming from some of the new nations at the forefront," he said, "but we want to make sure that the data ethics, the scientific conduct, the norms around how to take scientific funding, that those are part of that evolving global scientific culture."

The necessity for international scientific collaboration was laid bare at the meeting in discussions of the expanding threat from the novel coronavirus behind the COVID-19 pandemic. An additional plenary panel session and news briefing were added on-site in Seattle as the scope of the pandemic was coming into view. About 20 to 50 meeting participants from China were unable to attend the meeting, with some reaching out to their colleagues in online sessions.



Foreign researchers benefit the U.S. economy, Chu said at the AAAS meeting.

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