

**Association of American Universities Written Testimony**

**Senate Judiciary Committee:**

**Subcommittee on Immigration, Citizenship and Border Security**

**Hearing on Strengthening our Workforce and Economy through Higher Education and Immigration**

**June 14, 2021**

The Association of American Universities (AAU) is composed of 63 of America's leading research universities and two Canadian universities. AAU works with its members to help shape policy for higher education, science, and innovation; to promote best practices in undergraduate and graduate education; and to strengthen the contributions of leading research universities to American society. Ensuring the United States has an effective immigration policy that permits the attraction and retention of top international students and researchers is essential to our nation's innovation ecosystem, our economic competitiveness, and our national security.

Today, competition for the world's best and brightest minds is fierce. America's continued leadership and our global competitiveness require developing, attracting, and retaining both domestic and international STEM talent. Nearly half of all STEM graduate and doctoral degrees earned in the United States are awarded to international students, and many of these scholars go on to continue their work in key U.S. defense, technological, and biomedical industries upon graduation.<sup>1</sup>

To illustrate the importance of international students and scholars, we need look no further than the global pandemic we have been experiencing for the last two-plus years. Noubar Afeyan, born in Lebanon, came to the United States on a student visa and earned his doctoral degree in biochemical engineering from the Massachusetts Institute of Technology in 1987. An H1-B visa enabled him to continue his stay and eventually become a U.S. citizen. He co-founded Moderna, the pharmaceutical company behind one of the COVID-19 vaccines that are protecting millions of people from this global pandemic. The mRNA technology that Moderna and other companies use in their vaccines built on the work done at the University of Pennsylvania by the Hungarian-born and educated Katalin Karikó, who's now senior vice president at BioNTech. Karikó migrated to the United States in 1985.

But we are failing to keep pace with our competitor nations in bringing this kind of talent to the United States. International student enrollment rates at U.S. universities have declined significantly in the past two years; while this is partially due to the effects of the COVID-19 pandemic, it is also due to immigration policies that have made it more difficult for foreign

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<sup>1</sup> Zwetsloot et al., "China is Fast Outpacing U.S. STEM PhD Growth," Center for Security and Emerging Technology, August 2021, Page 8. Retrieved from <https://cset.georgetown.edu/wp-content/uploads/China-is-Fast-Outpacing-U.S.-STEM-PhD-Growth.pdf>

scholars to come to, and remain in, our country.<sup>2</sup> By contrast, enrollment rates for international students are rising in countries like Canada and the U.K. that have instituted new immigration policies seeking to attract students whose first choice may have been American universities, but that have been discouraged by our unwelcoming immigration policies.<sup>3</sup>

In an era of increased global competition for talent, America's antiquated and cumbersome immigration system represents a significant threat to our efforts to maintain our standing as an international leader in science and innovation. While the quality of U.S. universities and the research and educational opportunities they provide continue to attract top scientific and technical talent from around the world, we are distressed by Congress's continued unwillingness to reform immigration law and policies to maintain that competitive edge over other nations.

We offer the following considerations and recommendations on current immigration policy to ease existing challenges for international students and to enable our nation to continue to attract top international talent while maintaining national security and protecting critical research. In addition, we would also like to acknowledge and align ourselves with the testimony presented by Bernard Berolla of the Association of Public and Land-grant Universities (APLU) and the statement submitted by the American Council on Education (ACE).

## **1. International STEM talent is vital to our national interests**

China is a growing and persistent threat to America's continued scientific leadership and economic competitiveness. According to a study from Georgetown University's Center for Security and Emerging Technology, Chinese universities have been producing more STEM doctorates than their U.S. counterparts since the mid-2000s.<sup>4</sup> The report estimates that by 2025, based on current trends, China "will produce more than 77,000 STEM PhD graduates per year compared to approximately 40,000 in the United States."

Despite its unprecedented efforts to foster domestic talent, China still faces challenges attracting and retaining international students.<sup>5</sup> This remains a strategic opportunity for the United States to recruit international students and scholars to contribute to our research and innovation enterprise. International students are drawn to this country because of our values, openness, and the quality and prestige of our universities. Maintaining a welcoming posture towards international talent, both societally and through our immigration system, must be part of any strategy to win the global competition for talent – because relying solely on domestic U.S. talent will not be enough to outweigh China's huge population advantage.

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<sup>2</sup> Institute of International Education, "Open Doors Report on International Educational Exchange: International Student Enrollment Trends, 1948/49-2020/21." Retrieved from <http://www.opendoorsdata.org>.

<sup>3</sup> National Foundation for American Policy, "Analysis of American and Canadian International Student Data," March 2022. Retrieved from <https://nfap.com/wp-content/uploads/2022/03/Analysis-of-International-Student-Data.NFAP-Policy-Brief.March-2022.pdf>

<sup>4</sup> Zwetsloot et al., "China is Fast Outpacing U.S. STEM PhD Growth," Center for Security and Emerging Technology, August 2021. Retrieved from <https://cset.georgetown.edu/wp-content/uploads/China-is-Fast-Outpacing-U.S.-STEM-PhD-Growth.pdf>

<sup>5</sup> According to Chinese Ministry of Education data, international students accounted for only about 7 percent of doctoral enrollments in China in 2018, and the share was lower in prior years. Calculated by Zwetsloot et al., "China is Fast Outpacing U.S. STEM PhD Growth," Center for Security and Emerging Technology, August 2021.

International scholars are also indispensable to our national security. A report from the Institute for Progress finds that “50% of the advanced STEM degree holders working in the defense industrial base are foreign-born.”<sup>6</sup> The same report finds that outdated immigration policies are making it difficult for advanced STEM degree holders to remain in the United States and that they are increasingly selecting other countries, such as Canada, as alternatives. The final House GOP China Task Force Report echoes this conclusion, noting that the United States “needs to continue to attract the best and brightest STEM talent from around the world, or risk falling behind in the global race for talent and losing its competitive advantage in innovation.”<sup>7</sup>

Our nation must shift its immigration posture from defensive to offensive, recognizing that international STEM talent is an asset to this country and not a threat. Our position as a global leader in technology, innovation, and research depends on our ability to welcome and foster STEM talent, regardless of whether it is domestic or international. As the Ronald Reagan Institute asked: What would the world look like if China, and not the United States, set the ground rules for technology and innovation?<sup>8</sup>

*Recommendation: Earlier this year, the House passed the America Creating Opportunities for Manufacturing, Pre-Eminence in Technology, and Economic Strength (COMPETES) Act ([H.R. 4521](#)). The bill aims to boost American competitiveness by making strategic investments in scientific research, education, manufacturing, and other areas. Among its provisions<sup>9</sup> are immigration measures that would help our country attract and retain international STEM talent by exempting graduate students and doctoral STEM graduates from the numerical annual and per-country limitations on green cards and allowing international students to have “dual intent,” which means they can come to the United States as nonimmigrants without having to prove an intention to return to their home country after completing their studies. AAU strongly supports these provisions and urges Congress to act quickly to adopt them into law.*

*The America COMPETES Act also establishes a numerically limited immigrant classification for essential scientists and technical experts to promote the national security innovation base.<sup>10</sup> This classification is supported by, and essentially dedicated to, the Department of Defense (DOD). Qualifying individuals would have to work in research positions at U.S. institutions funded by DOD or possess scientific or technical expertise that would advance development of critical technologies as determined by DOD. AAU supports this provision, which is also supported by the U.S. Department of Defense.*

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<sup>6</sup> Neufeld, “STEM Immigration Is Critical to American National Security,” Institute for Progress, March 2022. Retrieved from <https://progress.institute/stem-immigration-is-critical-to-american-national-security/>

<sup>7</sup> McCaul et al., “China Task Force Report,” China Task Force, September 2020. Retrieved from <https://gop-foreignaffairs.house.gov/wp-content/uploads/2020/11/China-Task-Force-Final-Report-11.6.20.pdf>

<sup>8</sup> Talent et al., “The Contest for Innovation: Strengthening America’s National Security Innovation Base in an Era of Strategic Competition,” Ronald Reagan Institute

<sup>9</sup> Specifically Sec. 80303 in H.R. 4521

<sup>10</sup> Section 80401 in H.R. 4521

## **2. International STEM talent is necessary to help train and grow domestic STEM talent; an additive approach to cultivating domestic and international talent is needed**

The United States faces challenges in growing and educating our domestic STEM talent. As the National Science Board emphasized in its *Vision 2030* report, addressing these challenges starts with integrating STEM into all levels of the education system -- elementary, secondary, and postsecondary -- and ensuring that we are taking full advantage of the increasing diversity of United States population by better attracting and retaining women and students from underrepresented groups in STEM fields.<sup>11</sup> Efforts to expand access and increase diversity remain a high priority for AAU and our member institutions; these efforts have been a key component of AAU's efforts to improve the quality of undergraduate education and graduate training at our institutions.<sup>12</sup>

As we work to grow our domestic talent, it is also important to recognize the vital role that foreign-born STEM graduates play as professors and instructors, making up more than 29% of full-time science and engineering faculty.<sup>13</sup> Additionally, research suggests that international students are associated with increasing the number of bachelor's degrees in science and technology fields earned by U.S. students. Examining nearly two decades of data on undergraduates at U.S. universities, economist Madeline Zavodny found that "each additional 10 bachelor's degrees—across all majors—awarded to international students by a college or university leads to an additional 15 bachelor's degrees in STEM majors awarded to U.S. students."<sup>14</sup> Zavodny suggests that because international students disproportionately enroll in STEM programs, increased international enrollment causes universities to devote more resources to STEM departments which then become more attractive for domestic students as well. When thinking about domestic vs. international talent, we must move away from the idea that international talent pushes out or comes at the expense of domestic students. To successfully compete with countries like China, we must adopt a "both/and" approach that both develops our domestic talent and that simultaneously seeks to attract the best and brightest from across the world.

*Recommendation: In addition to passing the America COMPETES Act, Congress can and should adopt immigration reforms that will facilitate the flow of international students while continuing to protect our national security. These include: a streamlined process for seeking permanent resident status that is focused on the needs of this country as opposed to arbitrary caps; robust employment opportunities for STEM talent, such as Optional Practical Training (OPT); H-1B*

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<sup>11</sup> National Science Board, "Vision 2030," May 2020. Retrieved from

<https://www.nsf.gov/nsb/publications/2020/nsb202015.pdf>

<sup>12</sup> Association of American Universities, "AAU Initiatives in Undergraduate and Graduate Education," June 2022.

<sup>13</sup> National Science Board, "Science & Engineering Indicators: Foreign-born Students and Workers in the U.S. Science and Engineering Enterprise," 2020. Retrieved from <https://www.nsf.gov/nsb/sei/one-pagers/Foreign-Born.pdf>

<sup>14</sup> Zavodny, "The Impact on U.S. Men and Women in STEM Fields of Increases in International Students," National Foundation for American Policy, April 2021. Retrieved from <https://nfap.com/wp-content/uploads/2021/04/International-Students-and-STEM.NFAP-Policy-Brief.April-2021.pdf>

*numerical limitations that are better aligned with our economic need; and timely processing of immigration filings, applications, and employment authorization documents.*

### **3. Deferred Action for Childhood Arrivals (DACA)**

Finding a permanent legislative solution to replace the DACA program is another way the United States can protect and grow our domestic STEM talent. Since its inception in 2012, DACA has protected thousands of undocumented young people from deportation and has allowed them to continue to live, study, and work in the United States. While DACA was not intended to be a permanent solution, longstanding congressional inaction despite bipartisan support for protecting DACA recipients has put the program under immense pressure. Ongoing federal litigation over DACA has significantly weakened the program and may lead to its termination as soon as next summer.

As we recognize the 10<sup>th</sup> anniversary of DACA this week, we are keenly aware that the untimely end of the program is within sight with no alternatives in place. The deportation of thousands of DACA recipients, including current students and the many DACA recipients that have graduated and that are pursuing careers in a variety of critical fields, would be an enormous self-inflicted wound and would damage our ability to compete on the global stage. Congress must act with urgency to defend the principles of DACA and implement a permanent legislative solution.

*Recommendation: AAU urges Congress to provide a permanent legislative solution for DACA recipients that includes a pathway to citizenship. These young people are Americans in every way but immigration status, and they deserve to continue their lives in the United States without the constant threat of detention or deportation.*

### **4. Protecting the global higher education and scientific community from instability and war**

As a world leader in technology, innovation, and research, the United States plays a significant role in protecting the global higher education and scientific community from the effects of war, political strife, and natural disasters. The ongoing humanitarian crises in Afghanistan and Ukraine are potent examples that expose the limitations of our immigration system in protecting those seeking refuge. AAU members care deeply about displaced international scholars, as evidenced by their unprecedented effort to support students from Afghanistan and Ukraine, (including increased financial aid, free summer housing, scholarships and grants, and mental health and emotional support services). Many of our schools also partner with international organizations like Scholars at Risk and country- specific initiatives like the Ukrainian Global University to ensure that global events do not disrupt the valuable work of students, professors, and researchers. AAU stresses the need for continued federal support and flexibility for humanitarian immigration-based solutions.

*Recommendation: It is vital to U.S. interests that we strive to protect human rights and American values. Ensuring that the federal agencies responsible for providing immigration-based humanitarian aid are fully funded is an important first step. Eliminating the requirement that students seeking refuge prove the intent to return home will open other pathways for*

*international scholars to come to the United States. AAU urges congress to fund humanitarian programs so that our schools can help protect international scholars and do our part to foster a robust and healthy international scientific community.*

## **5. Technical, administrative, and procedural issues**

The United States requires a modern, predictable, and stable immigration system to remain globally competitive. As noted in a recent letter from 49 former national security leaders to Congress, China is well aware of the competitive advantage international STEM students offer the United States and recognizes that a reformed U.S. immigration system will present new challenges to China's competitiveness strategy.<sup>15</sup> Yet we have not secured this advantage; our immigration system remains sluggish and dated, it lacks the predictability and stability that international students seek, and our system is prone to sudden policy shifts that have jarring ripple effects. This leaves us with an unwelcoming system that cannot assure international students that they will be able to complete their courses of study and potentially contribute to the U.S. STEM workforce.

Our primary federal immigration agencies, the Department of Homeland Security (DHS) and the Department of State (DOS), lack the necessary funding and personnel to maximize the strengths of our current system. Delays and inconsistency in processing and adjudication, coupled with the inability to schedule visa interview appointments abroad, continue to plague the process. AAU supports vetting and security measures for foreign nationals and notes that long processing times can adversely affect national security because petitions and applications languishing in the queue are not being actively vetted. Moreover, as these agencies continue to recover from the challenges of the COVID-19 pandemic, they struggle with increased demands for humanitarian immigration programs as a result of the crises in Afghanistan and Ukraine. Necessary and sustained federal funding will shore up these services as policy makers grapple with the next steps.

*Recommendation: While significant reforms across the entire system are needed, smaller-scale changes would provide significant relief from some active stressors. For example, the outdated requirement that students prove, in order to qualify for a nonimmigrant student visa classification, an intention to return to their home country upon conclusion of their studies, should be eliminated. This requirement fails to consider the benefits in allowing international students to remain in the U.S. and often rests on assumptions about country conditions that are simply not true. Additionally, adequate funding for DHS and DOS will result in lower application fees, increased service quality, and decreased processing times.*

Attracting and retaining international students and scholars has been critical to America's economic success and national security for decades, and it and remains a key guarantor of our continued global economic leadership in the future. To ensure U.S. competitiveness and national security, we must focus on policies which continue to allow us to successfully compete in the global talent wars. We believe that the ideas we have outlined above will help us to do exactly

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<sup>15</sup> Letter from 49 former national security officials addressed to members of the Bipartisan Innovation Act Conference Committee, May 9, 2022. Retrieved from: <https://www.ndia.org/-/media/sites/press-releases/documents/2022/national-security-stem-talent-letter.pdf>

that and hope that the committee will give our recommendations their most serious consideration.

We appreciate the subcommittee's focus on strengthening the U.S. economy through higher education and immigration and look forward to working with the subcommittee to advance important immigration-related issues in the future