Association of American Universities
Inquiry · Innovation · Impact

February 28, 2022

The Honorable Nancy Pelosi
Speaker of the House
U.S. House of Representatives
H-232, The U.S. Capitol
Washington, DC 20515

The Honorable Chuck Schumer
Majority Leader
United States Senate
322 Hart Senate Office Building
Washington, DC 20510

The Honorable Kevin McCarthy
Minority Leader
U.S. House of Representatives
H-204, The U.S. Capitol
Washington, DC 20515

The Honorable Mitch McConnell
Minority Leader
United States Senate
S-230, The U.S. Capitol
Washington, DC 20510

Dear Speaker Pelosi and Leaders Schumer, McConnell, and McCarthy:

I write on behalf of America's leading research universities to thank Congress for advancing legislation designed to bolster and sustain our nation's leadership in science and innovation. As the House and Senate move to conference H.R. 4521, the America Creating Opportunities for Manufacturing, Pre-Eminence in Technology, and Economic Strength (COMPETES) Act, and S. 1260, the U.S. Innovation and Competition Act (USICA), we urge you to prioritize provisions that support U.S. global science and innovation leadership and eliminate provisions that impede our ability to accomplish that goal.

Our views on the key research and higher education provisions are laid out in this letter and in the letter AAU sent in August 2021 in response to differences between the Senate USICA and the House National Science Foundation for the Future Act, Department of Energy Science for the Future Act, and other House-passed bills.[1] We appreciate your hard work to advance these important competitiveness measures. We strongly urge you to reach bipartisan agreement on the legislation and to provide the requisite appropriations to effectuate the policies and programs authorized in the final legislation.

Strengthening U.S. Competitiveness

The U.S. Innovation and Competition Act (USICA) and the America COMPETES Act (COMPETES) include several proposals that aim to reinvigorate American competitiveness through increased investments in scientific research, research infrastructure, technology transfer, innovation, and manufacturing. Outlined here are those provisions we believe will best position our nation to bolster and support U.S. scientific leadership and lay the foundation for innovations essential to U.S. economic growth, national security, and global competitiveness for decades to come.

[1] AAU Letter to Congressional Leaders Outlining Priorities for Research Competitiveness Measures, August 20, 2021: https://www.aau.edu/key-issues/aau-sends-letter-congressional-leaders-outlining-priorities-research-competitiveness

Providing Robust Authorizations for NSF and DOE Office of Science

Increased funding to support the National Science Foundation (NSF) and the Department of Energy (DOE) Office of Science is vital to sustaining and accelerating innovation and discovery in the U.S. research enterprise. We support provisions in both bills that provide robust authorization funding levels for these agencies. We urge that a final agreement provide the full reauthorization of the DOE Office of Science (**Sections 10102-13 in H.R. 4521**) and greater upfront investment in NSF (**Section 10303 in H.R. 4521**).[2] Additionally, we appreciate and support the provisions to reauthorize and bolster the research programs of the National Institute of Standards and Technology and to reauthorize Small Business Innovation Research (SBIR) and Small Business Technology Transfer programs. These provisions are important to advancing U.S. innovation and fostering domestic businesses (**Section 10211 and Section 10691 in H.R. 4521)**.

In addition to authorizing robust funding levels, the final agreement should provide maximum flexibility for the implementation of all authorized activities and programs by giving the agencies significant discretion to make grants and other funding decisions congruent with congressional intent. We urge you to avoid overly prescriptive funding requirements that would limit an agency's ability to strategically address the emerging technologies and discoveries of the future.

Both bills authorize a new use-inspired research directorate at NSF designed to help the U.S. research enterprise to develop the science required to advance key areas of technology necessary to maintaining U.S. competitiveness. We must embrace new and innovative approaches to translating fundamental knowledge to address critical national goals and needs and to ensure our future economic and national security. Establishing a new directorate at NSF will provide opportunities to catalyze and advance research and move discoveries from idea to application faster. We strongly encourage that NSF be given significant flexibility to administer the new directorate (**Section 10308 in H.R. 4521, and Section 2102 in S. 1260**).

Enhancing Research Capacity and Strengthening STEM Education and Diversity

Our nation needs to improve the capacity of institutions across the country to succeed at cutting-edge research and the training of future generations of scientists and engineers. We support efforts to build institutional research capacity and diversity in STEM through expanding support for EPSCoR and other programs and approaches to build research capacity at Historically Black Colleges and Universities (HBCUs), Hispanic-Serving Institutions (HSIs), Minority-Serving Institutions (MSIs), and emerging research universities across the country. We need an all-of-the above approach if the United States is to compete with China and other nations and remain the global innovation leader.

Broadening participation in STEM is key to our country's ability to foster greater talent and innovation. While the bills provide for many education, workforce, and research capacity-building opportunities, we support the flexible House approach to strengthening EPSCoR without mandating a specific percentage for an appropriations set-aside for the program (**Section 10305(h) in H.R. 4521**). In addition, we support efforts to increase regional capacity for innovation and improve access to STEM in rural communities (**Sections 10521-28 in H.R. 4521 and Section 2210 in S. 1260**), as well as competitive grant programs at the Department of Education that would support equitable access to postsecondary STEM pathways (**Section 90201 in H.R. 4521 and Section 6111 in S. 1260**). These measures will increase our nation's research capacity while also helping cultivate and foster our domestic talent. Finally, we encourage you to consolidate the number of new research capacity building programs authorized in

[2] The Senate Energy & Natural Resources Committee released on February 18, 2022, its companion version of the DOE Science for the Future Act of 2022. While it was not included in the original Senate-passed USICA package, we encourage inclusion of a comprehensive reauthorization of the DOE Office of Science in the final legislation.

both bills into a smaller number of strategic programs that address the varying needs of different types and locations of institutions.

Finally, we strongly support the graduate education provisions in the House NSF sections. In addition to bolstering graduate scholarships and fellowships, the bill also adopts many recent recommendations to help ensure that federal graduate STEM education programs are dynamic and inclusive, that they provide necessary mentoring support, and that they continually evolve to prepare a truly innovative workforce. We also appreciate the House's proposed increases to the Graduate Research Fellowship Program (GRFP) and the National Research Traineeship Program.

We are pleased that the House DOE Science legislation includes provisions to broaden participation for teachers and scientists and to increase diversity, equity, and inclusion of STEM professionals working in Department of Energy-relevant disciplines to expand the recruitment pool. We urge inclusion of the bill's provisions to enhance workforce development programs, build capacity through research partnerships, and establish a university-led traineeship program to address workforce training needs for DOE.

Bolstering Research Infrastructure

As outlined in our August 2021 letter, we support the House provisions authorizing critical research-enabling infrastructure, including a substantial increase to NSF's Mid-Scale Research Infrastructure program and the establishment of a National Secure Data Service demonstration project. Additionally, we support strong authorizations and funding for NSF's Major Research Instrumentation (MRI) and Academic Research Infrastructure (ARI) programs. Support for these additional infrastructure programs is critical to updating and modernizing the research infrastructure at our nation's colleges and universities and to ensuring that NSF research is conducted with efficient, up-to-date equipment, and state-of-the-art computational systems and laboratories (**Section 10307 in H.R. 4521).**

The House bill also ensures that the DOE's Office of Science construction projects and upgrades of major scientific user facilities are resourced and authorizes a mid-scale instrumentation program to enable the development and acquisition of state-of-the-art instruments that would significantly accelerate scientific breakthroughs at research facilities. We support the inclusion of these provisions in the final legislation. (**Section 10102-13 in H.R. 4521).**

Enhancing Technology Transfer

The Senate bill tasks the proposed new NSF directorate to undertake specific technology transfer activities including providing support for research tests beds (**Section 2108 in S. 1260**) and support for specific university technology commercialization programs and activities (**Section 2109 in S. 1260).** The House bill also requires new and innovative support mechanisms to facilitate technology transfer as a part of the NSF Directorate for Science and Engineering Solutions (**Section 10308 in H.R. 4521**) but is less prescriptive in its approach. We appreciate and support the intent of the provisions in both bills. We urge that the final agreement assign a high priority to NSF programs and activities that support technology transfer at universities aimed at moving NSF-funded ideas from the laboratory to the marketplace.

Addressing Sexual Harassment and Misconduct

A safe and harassment-free environment for all students, faculty, and personnel at our universities is essential to achieving the diversity, equity, and inclusion required for our nation to successfully advance our scientific enterprise and maintain its global leadership in science and innovation. This is particularly important in laboratories and other research environments where evidence demonstrates that diversity enhances scientific

innovation. We support the House and Senate provisions on this matter. To this end and we want to work with you as finalize these important provisions to ensure that they provide clear definitions of harassment that will foster a climate and culture in which sexual misconduct and gender harassment is unacceptable, individuals are accountable for misbehavior, and learning and work environments – including those at our universities – are free of harassment (**Sections 10541-48 in H.R. 4521 and Section 2521 in S. 1260).**

Improving College Information to Empower Greater Postsecondary Educational Success

Current federal postsecondary education data provides an incomplete and inaccurate picture of student graduation rates and outcomes. The House bill includes the College Transparency Act which makes important improvements to the current postsecondary data system to provide more accurate, timely, and higher-quality aggregate outcomes data in user-friendly ways. We support this provision (**Section 90306 in H.R. 4521)**. Better information for students and families as they make decisions about their postsecondary education goals and what it means for their post-graduation pathways, employment, and potential earnings will help illuminate successful education and career pathways.

Building Pathways for International Talent

A new and stronger wave of U.S. scientific discovery and innovation will require policies that attract and retain top international students and researchers. Building pathways for international STEM talent to stay in the United States after graduation and build their innovations in America and to contribute to advancing U.S. science is vital to our ability to compete globally. We strongly support the House provision exempting international STEM graduates from employment-based immigrant visa limits and providing for the admission of entrepreneurs and employees who seek to build their start-up entities in the United States (**Section 80301-03 in H.R. 4521**).

Providing Clarity and Tools to Strengthen International Relationships and Evaluate Security Risks

U.S. economic competitiveness and national security depend on our ability to understand an increasingly globalized world and the geopolitical factors that affect it and U.S. interests. Reauthorizing the Title VI international education and Fulbright-Hays programs is integral to developing the domestic talent we need to compete on the global stage and protect our nation's security by creating deep expertise in world regions and languages of strategic interest (**Section 90301 in H.R. 4521 and Section 6121 in S. 1260; Section 30219 in H.R. 4521 and Section 3134 in S. 1260**).

As part of building international relationships and developing cultural understanding, we must also ensure we have the appropriate tools to evaluate and identify the potential risks that may undermine those relationships. Institutions want to ensure they fully comply with Section 117 of the Higher Education Act (HEA) foreign gift reporting requirements not only because it is the law, but also to serve our shared goal of safeguarding our institutions against undue foreign government influence and interference. We support the addition of statutory language requiring negotiated rulemaking that is outlined in both bills **(Section 90304(a) in H.R. 4521 and Section 6124(a) in S. 1260**) and a new requirement for the Department of Education to establish a point of contact for institutions (**Section 90304(a) in H.R. 4521**). As we have learned more about the threat of some malign foreign actors, institutions of higher education would also benefit from information sharing mechanisms to identify and evaluate potential risks in international relationships. We support provisions to address this issue (**Section 10731 of H.R. 4521 and Section 2302 in S. 1260**).

Risks to U.S. Innovation and Competitiveness

As Congress moves toward a final agreement, it is important to understand the myriad of policies and actions related to research security that have already been implemented,[3] and to avoid new requirements that are duplicative, unnecessary, or counterproductive. America's leading research universities take seriously the economic and national security threats posed by foreign adversaries who seek to interfere with our highly successful innovation enterprise. However, we must balance efforts to safeguard research with our responsibility to maintain the free flow of fundamental scientific information and international talent. Therefore, we urge that the final agreement exclude the following provisions, which we believe will impede our efforts to secure and advance U.S. scientific research and innovation.

Unnecessary Collection of Data or Other Information

Several provisions proposed in the Senate bill would create unnecessary collections of data and/or information that would only overwhelm agencies and institutions, duplicate information already collected by federal research agencies, or do little to clarify or enhance existing federal research security requirements. Ultimately, inclusion of these provisions would cause more harm to our ability to advance important scientific research. These provisions would impose overly burdensome new requirements that threaten scientific openness; put at risk our ability to participate in critical international scientific collaborations; or harm our ability to recruit and take advantage of international STEM talent. Of greatest concern is the proposal to expand the scope of current Committee on Foreign Investment in the United States (CFIUS) review to include certain gifts and contracts between universities and foreign persons (**Section 3138 in S. 1260**). CFIUS was created to prevent ongoing foreign control of U.S. corporations. Needless application of CFIUS reviews to university gifts and contracts will likely overwhelm and distract CFIUS from effectively fulfilling its actual purpose of reviewing potentially damaging foreign investments in U.S. companies while at the same time discouraging a wide range of major donations, gifts, and contracts that often help advance U.S. science and innovation in an increasingly competitive environment.

In both bills, a new requirement is included for universities to maintain a searchable database to capture faculty and staff gifts and contracts with foreign entities (**Section 90304(b) in H.R. 4521 and Section 6124(b) in S. 1260**). Creating new unbounded reporting requirements for faculty, staff, and institutions is duplicative of existing statutory disclosure requirements enacted as part of Section 223 of the 2021 National Defense Authorization Act. These proposed new requirements would not enhance our ability to identify potential conflicts of interest. Rather, this provision would create an additional and unnecessary burden upon faculty researchers, universities, and the U.S. Department of Education. We strongly oppose the Senate provision and encourage adoption of the House provision which, unlike the Senate version, includes a $50,000 threshold that makes implementation more feasible and less onerous. That said, we still question the value and need for this provision, and we urge further modification to further reduce the burden imposed by this requirement in a final agreement.

We are also concerned that an NSF mandate to collect final copies of <u>any</u> contracts, agreements, or documentation of financial transactions between universities, their foundations, and related organizations and any educational, cultural, or language entity that is directly or indirectly funded by the Government of the People's Republic of China (**Section 2526 in S. 1260**) would be incredibly broad and would overwhelm NSF and grant applicants with unnecessary and unhelpful new information collection and reporting requirements. Alternatively, we support **Section 10306(d)(7) in H.R. 4521** which provides NSF the authority to use discretion to request additional documentation as necessary. Additionally, NSF should not be assigned to collect plans to identify sensitive or emerging area of research for which addition security controls and/or background screening are required (**Section 2308 in S. 1260**) because the Department of Commerce Bureau of Industry and Security (BIS) is already charged with this task in accordance with the Export Control Reform Act.

[3] University and Federal Actions Taken to Address Research Security Issues, August 2, 2021: https://www.aau.edu/key-issues/university-and-federal-actions-taken-address-research-security-issues

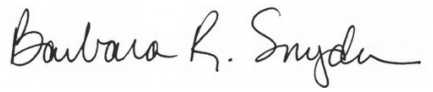
Broadly Defining a Foreign Talent Program

Malign foreign recruitment and talent programs pose a real threat to research security. Universities are actively engaged in evaluating how to avoid partnerships with these programs. Applying an overly broad definition of a foreign talent recruitment program would not only harm our ability to attract and retain international talent, it could also potentially limit important international scientific collaborations and activities. This would undermine the United States' global scientific leadership and be contrary to the very goals of the House and Senate competitiveness bills. Therefore, we urge that you exclude **Sections 2303 and 6101 in S. 1260** and instead accept **Section 10651 in H.R. 4521,** which narrows the definition of talent recruitment prohibition to "malign" programs from countries of concern and provides guardrails to ensure that legitimate and important international scientific collaborations and activities are not adversely impacted.

In closing, we commend the bipartisan efforts that both the Senate and the House have taken to develop this important legislation, and we strongly encourage that a final bipartisan agreement be reached in the weeks ahead. Fifteen years ago, Congress approved the bipartisan and ambitious America COMPETES Act of 2007 to bolster our nation's science and technology enterprise to strengthen our economy and to ensure our future national and homeland security. Three years later, Congress passed the America COMPETES Act of 2010. Both measures included bold plans for federal investment in science and technology to help ensure the United States would remain the global innovation leader. But, as a new analysis from the American Association for the Advancement of Science illustrates, Congress fell well short of matching those plans with actual funding.[4] We urge you to seize this moment to approve a final competitiveness bill and appropriations to match the bold science and technology investment targets to fuel the innovations that will empower our nation's economy, health, and security.

We thank you for your continuing efforts on these very important pieces of legislation and we look forward to working with you to ensure a final agreement advances U.S. innovation and competitiveness.

Sincerely,



Barbara R. Snyder
President, Association of American Universities

cc: Chair Cantwell and Ranking Member Wicker, Senate Committee on Commerce, Science & Transportation
Chair Murray and Ranking Member Burr, Senate Committee on Health, Education, Labor & Pensions
Chair Manchin and Ranking Member Barrasso, Senate Committee on Energy & Natural Resources
Chair Brown and Ranking Member Toomey, Senate Committee on Banking, Housing & Urban Affairs
Chair Menendez and Ranking Member Risch, Senate Committee on Foreign Relations
Chair Peters and Ranking Member Portman, Senate Committee on Homeland Security & Governmental Affairs
Chair Durbin and Ranking Member Grassley, Senate Committee on the Judiciary
Chair Reed and Ranking Member Inhofe, Senate Committee on Armed Services
Chair Johnson and Ranking Member Lucas, House Committee on Science, Space & Technology
Chair Scott and Ranking Member Foxx, House Committee on Education & Labor
Chair Meeks and Ranking Member McCaul, House Committee on Foreign Affairs
Chair Nadler and Ranking Member Jordan, House Committee on the Judiciary
Chair Waters and Ranking Member McHenry, House Committee on Financial Services
Chair Smith and Ranking Member Rogers, House Armed Services Committee

[4] Analysis: As Congress Considers COMPETES, How Short Are We From The Old COMPETES?: https://www.aaas.org/sites/default/files/2022-02/AAAS%20COMPETES%20Shortfalls%20Feb%202022_0.pdf