



AAU Summary of selected provisions of interest in the U.S. Innovation and Competition Act of 2021

(Please see [here](#) for a fuller [summary](#) of all provisions from Senate Democrats)

Provisions in bold are categorized by AAU and Provisions of Concern

As of June 29th, 2021

Division A: CHIPS and O-RAN 5G Emergency Appropriations

| Section | Title | Summary |
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| Sec. 1002 | Creating Helpful Incentives to Produce Semiconductors (CHIPS) for American Fund. | \$52 billion in emergency supplemental appropriations to implement these programs, including \$10.5B at DOC for R&D-related measures over 5 years |

Division B: Endless Frontier Act

| Section | Title | Summary |
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| Sec. 2004 | Interagency Working Group. | Creates an interagency working group, led by OSTP and including the NSF, DOE, and DOC, among other agencies to coordinate and to avoid duplication in the activities authorized in the legislation and existing activities |
| Sec. 2005 | Key Technology Focus Areas. | List 10 areas: high performance computing, quantum information science and technology, robotics and automation, natural and anthropogenic disaster prevention, advanced communications technology and immersive technology, biotechnology, data storage, advanced energy and industrial efficiency tech, and advanced materials science. Establishes an annual review process in coordination with an interagency group and reporting mechanisms. NSF and DOE required to use Interagency group of above section to annually review and update key technology focus areas. |
| Title I: National Science Foundation Technology and Innovation | | |
| Section 2102 | Directorate Establishment and Purpose. | Establishes new directorate with goals of strengthening leadership in U.S. critical tech |

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| | | areas and commercialization and engage more students |
| Sec. 2103 | Personnel Management. | Would allow designation of term-limited program directors to establish research and development (R&D) goals, build research collaborations, and monitor progress |
| Sec. 2104 | Innovation Centers. | The Directorate shall establish a program to make awards, through a competitive selection process, to eligible entities to establish university technology centers and innovation institutes |
| Sec. 2105 | Transition of NSF Programs. | Would permit NSF Director to transfer the management of relevant existing programs to the Directorate, such as convergence accelerators, AI research institutes, and the NSF Innovation Corps. |
| Sec. 2106 | Providing Scholarships, Fellowships, and Other Student Support. | The Directorate will fund institutional undergraduate scholarships, graduate fellowships and traineeships, and postdoctoral student awards in the key technology focus areas. For NSF student support activities within NSF the Director may provide funds to the Directorate for Education and Human Resources. The Director will work to increase the participation of underrepresented populations in the fields related to the key areas of focus. The Director may establish or augment programs targeted at underrepresented populations, and support traineeships or other relevant programs at institutions with enrollment of underrepresented populations. |
| Sec. 2107 | Research and Development. | The Director will establish a competitive grants program for research development within the key technology areas of focus. Recipients will include higher education institutions, research institutions, nonprofit and private sector entities and another others defined by the Director. |
| Sec. 2108 | Test Beds. | The Directorate will establish a competitive grants program to award higher education institutions or consortia (led by educational institutions, may include industry) 7 year grants (with the possibility of a 5-year extension) to create test beds and fabrication facilities to advance new technologies in the key technology areas and transfer the technologies into the commercial market through the private sector. |
| Sec. 2109 | Academic Technology Transfer. | Tech transfer offices available funds; regional hubs; set aside \$4B over 5 years |
| Sec. 2110 | Capacity-Building Program for Developing Universities. | The Director will establish a competitive grant program to build in research capacity and eligible institutions including HBCUs, MSIs, tribal colleges, and institutions that do not have more than \$50,000,000 in annual federally-financed R&D. |

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| | | Eligible institutions may carry out the activities in partnership with another institution. \$150,000,000 authorized every fiscal year. |
| Sec. 2111 | Technical Assistance. | Director can coordinate with other agencies to provide technical assistance to recipients of grants |
| Sec. 2112 | Coordination of Activities. | The Director will coordinate with the Secretary of Energy, Director of NIST, and others to further research goals and avoid duplication |
| Sec. 2113 | Reporting Requirements. | The director will annually report to congress on strategic planning and spending for the next 5 years of the directorate on how the Foundation will increase funding for the research and education for populations underrepresented in STEM and geographic areas |
| Sec. 2114 | Hands-on Learning Program. | The director shall use \$25,000,000 each year to fund |
| Sec. 2115 | Intellectual Property Protection. | |
| Sec. 2116 | Authorization and Appropriations for the National Science Foundation (See chart of funding levels below). | A total of \$81 billion is to be authorized and appropriated for the NSF for fiscal years 2022 through 2026 (ramped up over the duration) (\$55B to “base” NSF and \$26B to Tech Directorate). Additionally, there is a provision stating that no new awards shall be made by the Technology Directorate for any fiscal year in which the total amount appropriated to NSF is less than the total amount appropriated the prior fiscal year (adjusted by the rate of inflation). Funding from the Directorate is permissible to support other areas of the Foundation. Prohibits funding to the Directorate from being used for construction. |
| Sec. 2117 | Authorization of appropriations for the Department of Energy. | \$17B over 5 years |
| Sec. 2118 | Authorization of appropriations for the Defense Advanced Research Projects Agency. | DARPA will be appropriated \$3,500,000,000 for each of the fiscal years 2022 – 2026 to conduct research in key technology areas of focus |

Title II: NSF Research, STEM, and Geographic Diversity Initiatives

| Section | Title | Summary |
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| Sec. 2201 | Chief Diversity Officer of the NSF. | Establishes a Chief Diversity Officer at NSF who is responsible for policy advice, oversight, guidance, and coordination on matters of diversity and inclusion. The officer will develop and maintain a strategic plan that publicly outlines diversity goals at NSF. |
| Sec. 2202 | Programs to Address the STEM Workforce. | The Director shall issue undergrad, graduate, and post-doctoral scholarships to help broaden |

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| | | participation of underrepresented populations in STEM. |
| Sec. 2203 | Emerging Research Institution Pilot Program. | The Director will establish a 5-year pilot program for awarding grants to partnerships led by 1 or more emerging research institutions to build capacity at emerging research institutions. Eligible partnerships must include at least 1 emerging research institution and at least 1 institution that on average for the 3 years prior to application received \$100,000,000 in Federal research funding. |
| Sec. 2204 | Personnel Management Authorities for the Foundation. | The Foundation may carry out a program in order to facilitate recruitment of eminent experts in science or engineering for R&D projects. The service of an employee under the program cannot exceed 4 years, unless approved by the Director. |
| Sec. 2205 | Advanced Technological Manufacturing Act. | Reauthorizes and updates the NSF Advanced Technological Education (ATE) program <i>S. 725, Advanced Technological Manufacturing Act (Wicker, Cantwell, Rosen)</i> |
| Sec. 2206 | Intramural Emerging Institutions Pilot Program. | Would direct the NSF director to establish a series of pilot programs to expand the number of institutions of higher education that can successfully compete for NSF grants (also a provision from S. 725) |
| Sec. 2207 | Public-Private Partnerships. | Encourages NSF to pursue partnerships |
| Sec. 2208 | AI Scholarships for Service Act. | Authorizes scholarships to undergraduate and graduate students studying AI and related fields in exchange for service in the public sector equal to the period of time of their scholarship upon completion of their degree. <i>S.1257, AI Scholarship for Service Act (Peters, Thune)</i> |
| Sec. 2209 | Geographic Diversity. | Would set aside at least 20 percent of the funds allocated to NSF, including at the new Directorate, and DOE to support the EPSCoR <u>program</u> , which provides funds targeted at building research capacity in states that historically receive low R&D funding. There are currently 28 states and jurisdictions in this competitive program. (FY21 EPSCoR program funding is ~\$200m; 20% of total NSF is \$1.7B). From both the EPSCoR program and others, EPSCoR states currently receive about 13% of all NSF funding. |
| Sec. 2210 | Rural STEM Education Act. | Would direct NSF and DOC to improve STEM education and training access in rural communities. <i>S.1374, Rural STEM Education Act (Wicker, Rosen, Cornyn, Hassan) Note AAU has supported House companion legislation</i> |
| Sec. 2211 | Quantum Network Infrastructure and Workforce Development Act. | Would direct NSF, OSTP, and NIST to advance quantum research and education. Would direct DOE to supplement the Energy Sciences Network |

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| | | User Facility. <i>S.1161, Quantum Network Infrastructure and Workforce Development Act (Thune, Hassan)</i> |
| Sec. 2212 | Supporting Early-Career Researchers Act. | Creates an NSF 2-year pilot program to award grants to early-career researchers at higher education institutions or federal research facilities for up to two years. Priority would be given to those that are underrepresented or at a minority-serving institution or EPSCoR jurisdiction. <i>S. 637, Supporting Early-Career Researchers Act (Blumenthal, Merkley, Coons, Brown, Van Hollen, Klobuchar, Hirono)</i> Note AAU has supported Senate bill and House companion legislation |
| Sec. 2213 | Advancing Precision Agriculture Capabilities Act. | Updates considerations for precision agriculture technology within NSF's advanced technological education (ATE) program and support NSF research on the advancement of Internet of Things (IoT) technology for precision agriculture. <i>S. 1395, Advancing Precision Agriculture Capabilities (Fischer, Klobuchar)</i> |
| Sec. 2214 | Critical Minerals Mining Research. | Directs NSF, OSTP, and DOC to research and coordinate various activities related to domestic development of critical minerals |
| Sec. 2215 | Caregiver Policies. | Directs OSTP to provide guidance to each federal science agency to establish policies to offer flexibility and supplements in grants for those with caregiving responsibilities |
| Sec. 2216 | Presidential Awards. | Expands outreach to populations underrepresented in STEM for the Presidential Awards for Excellence in Technology and Science Research and authorizes new awards to teachers from Puerto Rico and DC. |
| Sec. 2217 | Bioeconomy Research and Development Act of 2021. | Would create the National Engineering Biology Research and Development Initiative and a supporting interagency coordinating body. Would require a National Academies of Sciences review on ethical, legal, environmental, safety, security, and societal issues. <i>S. 1418, the Bioeconomy Research and Development Act (Markey, Rubio, Gillibrand, Capito)</i> |
| Sec. 2218 | Microgravity Utilization Policy. | Would authorize NSF to facilitate access to the microgravity environment, including in private sector platforms, for NSF funding awardees |
| Title III: National Science Foundation (NSF) Research Security | | |
| Sec. 2301 | NSF Research Security | Codifies a research security office at NSF and Chief of Research Security and activities |
| Sec. 2302 | Research security and integrity information sharing analysis organization. | Establishes a research security and integrity information sharing analysis organization (RSI-ISA) to serve as a clearinghouse for information |

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| | | on identifying improper or illegal efforts by foreign entities to obtain research results, know how, materials, and IP and for other purposes. |
| Sec. 2303 | Foreign government talent recruitment program prohibition. | Prohibits federal research awards from being awarded for any proposal where the principal investigator or other individuals directly involved in the research are members of a foreign government talent recruitment programs sponsored by China, Russia, Iran, or North Korea. |
| Sec. 2304 | Additional requirements for directorate research security. | Requires NSF to establish an initiative to work with IHEs to support protection of intellectual property, limit undue influence, including through talent recruitment programs, and support efforts toward development of domestic talent in relevant science and engineering fields. |
| Sec. 2305 | Protecting Research Security from Cyber Theft. | Directs NIST to make publicly available resources to help research institutions and institutions of higher education identify, protect, detect, respond to, and recover to manage the cybersecurity risk of the institution involved in conducting research. |
| Sec. 2307 | Research Funds Accounting. | The Comptroller General shall conduct a study on the federal funding made available to foreign entities of concert. |
| Sec. 2308 | Plan with respect to sensitive or controlled information and background screening. | Requires NSF to develop a plan to identify research areas that may include sensitive or controlled information and provide background screening for individuals working in such research areas who are employed by NSF or are recipients of NSF funds. |
| Title IV: Regional Innovation Capacity | | |
| Sec. 2401 | Regional Technology Hubs. | The Secretary will carry out a program to encourage new and constructive collaboration among local, State, and federal government entities, academia, the private sector, economic development organizations, and labor organizations to support eligible consortia in regional innovation |
| Sec. 2402 | Manufacturing USA Program. | The program is to be authorized and appropriated at \$2.412 billion for the fiscal years 2022 – 2025 with \$1.5 billion made available to support the establishment of at least 3 traditional Manufacturing USA institutes each year during that period. \$375 million will be made available for the establishment of at least 3 alliance manufacturing institutes over the fiscal years 2022 - 2026. \$100 million will be made available for the same period to support programming for commercialization, workforce training, and supply chain |

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| Sec. 2403 | Establishment of Expansion Awards Program in Hollings Manufacturing Extension Partnership and Authorization for the Partnership. | The Director will establish program that will expand awards that will provide coordination on engagement in workforce training, workforce development boards, institutions of higher educations (including community colleges), labor organizations, and nonprofit job training providers. The awards will also provide resiliency in supply chains, expand advanced technology services to small and medium manufacturers, and build capabilities across the partnership for domestic supply chain resiliency. The program is authorized and appropriated at \$600 million for each of fiscal years 2022 – 2026 |
| Sec. 2404 | National Manufacturing Advisory Council. | Establishes Council at the Dept. of Commerce (DOC) <i>S. 1044 National Manufacturing Advisory Council for the 21st Century Act (Peters, Rubio)</i> |
| Title V: Miscellaneous | | |
| Sec. 2501 | Strategy and report on economic security, science, research, and innovation to support the national security strategy. | The Directors of OSTP, NSTC, NEC, and other heads of agencies will review strategy programs and resources pertaining to national competitiveness and develop or revise a national strategy to improve national competitiveness. They will submit a report on their findings to Congress and terminate 5 years after the date enacted. |
| Sec. 2502 | Person or entity of concern prohibition. | No person under section 1237(b) of the 1999 NDAA or the entity under 1260H of the 2021 NDAA can receive or participate in any grant, award, or program in the Directorate established section 2102, the supply chain resiliency program, and the Manufacturing USA Program. |
| Sec 2503 | Study on emerging and technology challenges face the United States and recommendations to address them. | The Secretary of Commerce shall enter into agreement with the National Academies to study and identify the 10 most critical emerging science and technology challenges facing the US and develop recommendations for legislation. |
| Sec. 2504 | Report on semiconductor shortage. | One year after date of enactment the Comptroller of the US will submit to Congress a report on the global semiconductor shortage and manufacturing |
| Sec. 2505 | Supply chain resiliency programs. | Directs Commerce to establish a supply chain resiliency and crisis response program to carry out promoting US leadership with respect to critical technologies of the US essential to mid- and long-term national security and encourages partnerships between government and industry. |
| Sec. 2506 | Semiconductor incentives. | Amends NDAA FY21 and authorizes \$2 billion in additional financial incentives for semiconductor manufacturing. |

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| Sec. 2507 | Research Investment to Spark the Economy Act (RISE). | Directs Commerce, Ag, DOD, ED, DOE, Interior, HHS, DOT, NASA, EPA, and NSF to provide supplemental funding to extend the duration of an award disrupted because of COVID-19 (no specific authorization provided). <i>Note AAU has supported the original RISE Act, S. 289, (Markey, Tillis, Collins, Peters, Warren, Brown, Stabenow, Coons, Rosen, Van Hollen, Baldwin, Cardin, Kelly)</i> |
| Sec. 2521 | Combatting sexual harassment in science. | Directs NSF to create a competitive grant program to expand research efforts to understand the factors and consequences of sexual harassment in STEM and examine practices to reduce it. Directs the Director of OSTP to review existing Federal science agencies policies addressing sexual harassment and develop a set of policy guidelines for Federal science agencies. Also requires the National Academies to update a report on conduct. <i>S. 1379, Combatting Sexual Harassment in Science (Blumenthal, Smith, Reed, Van Hollen, Klobuchar, Hirono, Shaheen, Sanders, Wyden, Markey, Rosen, Brown, Padilla)</i> |
| Sec. 2522 | National Science Corps. | Authorizes a 5-year pilot program to create a National Science Corps at NSF comprised of exceptional K-12 STEM educators and a STEM Education Advisory Board to oversee the Corps. Would establish no less than 10 Regional Centers to support Corps members. Would authorize \$100 million over FY22-26 from new Directorate funds (Sec. 2106 authorization) |
| Sec. 2523 | Annual report on foreign research. | Directs NSF to submit report to congress research funding provided to research institutions in foreign counties and a list of projects funded by NSF to foreign entities. |
| Sec. 2525 | Foundation funding to institutions hosting or supporting Confucius Institutes | Prohibits NSF funding to institutions that maintain a contract or agreement between the institution and a Confucius Institute unless NSF deems a waiver appropriate. |
| Sec. 2526 | Supporting documents. | Mandates NSF 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. Also requires NSF to collect a detailed description of any financial contributions from the Government of the People’s Republic of China or affiliates |
| Sec. 2527 | BASIC Research. | Federal government cannot disclose any member of a grant review panel to an applicant. Federal agencies with annual extramural research over |

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| | | <p>\$100,000,000 shall develop an agency research public access policy that is consistent with the agency. 3 years after enactment, the Comptroller General shall submit a report to congress with analysis of the period between the date on which each applicable paper becomes publicly available and examines the effectiveness of Federal research public access policy. Any institution receiving federal research grants shall notify and seek authorization form the agency for funds derived from the grant made available through a subgrant or subsequent grant and ensure that each subgrant or subsequent grant is within the scope of the Federal grant award. Federal agencies awarding grants in scientific research shall be impartial and shall not advance any political position or fund a grant to reach a predetermined conclusion.</p> |
| Sec. 2528 | Foundation for Energy Security and Innovation. | <p>Directs DOE to establish a nonprofit corporation – the “Foundation for Energy Security and Innovation” to advance collaboration with energy researchers, institutions of higher ed, industry, and nonprofit and philanthropic organizations to accelerate the commercialization of energy technologies. It shall not be an agency or instrumentality of the Federal Government and may collaborate with 1 or more organizations to establish and carry out the activities of the foundation. The Foundation may conduct and support studies, competitions, projects, and other activities. It may also award fellowships and grants for research an development.</p> |
| <p>Title VI Space Matters (Space Act)</p> | | |
| Sec. 2604 | Space situational awareness, data, information, and services: provisions to non US Gov entities. | <p>The Director of Commerce in coordination with the other entities within Commerce shall carry out a program to improve the collection, processing, and dissemination of space situational awareness data, information and services. The program is to be authorized at \$15,000,000 for FY21.</p> |
| Sec. 2605 | Centers of Excellence for Space Situational Awareness. | <p>The Secretary shall award grants to establish one or more Centers of Excellence for Space Situation Awareness to advance scientific situational awareness. The centers will conduct research, development, and demonstration projects related to detecting, tracking, identifying, characterizing, modeling, and minimizing space safety, security and sustainability risks to improve awareness. Eligible entities include higher ed institutions or nonprofit organizations. Grants will</p> |

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| | | be awarded for a period of 5 years. The program is authorized at \$20 million. |
| Subtitle B – NASA Authorization Act of 2021 | | |
| Sec. 2613 | NASA Authorization Act Appropriations. | <p>NASA is to be authorized and appropriated in <u>FY21</u> at \$23,495,000,000</p> <ul style="list-style-type: none"> • Exploration: \$6,706,400,000 • Space Operations: \$3,988,200,000 • Science: \$7,242,700,000 • Aeronautics: \$828,700,000 • Space Technology: \$1,206,000,000 • Science, Tech, Engineering, and Mathematics Engagement \$120,000,000 • Safety, Security, and Mission Services: \$2,936,500,000 • Construction and Environmental Compliance and Restoration: \$390,300,000 • Inspector General: \$44,200,000 |
| Sec. 2614 | Competitiveness within the human landing system program. | Would require the NASA Administrator to fund at least two entities to design, develop, test and evaluate a human landing system. It would also authorize, in addition to amounts otherwise appropriated for the Artemis program, for FY21-25, \$10.032 billion to NASA to carry out the human landing system program |
| Sec. 2631 | Science Priorities. | Sense of Congress reaffirms that a balanced and adequately funded set of activities, consisting of research and analysis programs, tech development, suborbital research activities and space missions contribute to a robust and productive science program and serves as a catalyst for innovation. The Administrator will set priorities following guidance from scientific community and NASEM. |
| Sec. 2632 | Lunar discovery program. | The Administrator may carry out a program to conduct lunar science research, including missions to the moon and can procure services of commercial landers. Lunar science research must be carried out consistent with NASEM recommendations. |
| Sec. 2633 | Search for Life. | Requires NASA to continue its multidisciplinary science and technology development program to search for life beyond Earth |
| Sec. 2634 | James Webb Space Telescope. | Requires NASA to monitor the performance of the James Webb Space Telescope project and improve the reliability of cost estimates and contractor performance data as the project continues and requires Congressional notification |

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| | | if program development costs if they are anticipated to exceed \$8,802,700,000. |
| Sec. 2635 | Nancy Grace Roman Space Telescope. | Directs NASA to continue developing the telescope to meet decadal priorities and includes a sense of Congress that the cost growth of flagship class missions has harmed the Science Mission Directorate's portfolio balance. |
| Sec. 2637 | Earth science missions and programs. | Sense of Congress that the Earth Science Division plays an important role in efforts to collect and use Earth observations in service to society and global change. The missions and programs shall follow the recommendations and guidance of the community and NASEM decadal surveys. |
| Sec. 2638 | Life Science and Physical Science Research. | Authorizes multidisciplinary life science and physical science fundamental research program to investigate the basis of changes to biological systems when those systems are exposed to space, including the effects of long-duration exposure to deep space-related environmental factors on those systems. |
| Sec. 2639 | Science mission to Mars. | The Administrator should conduct one or more science missions to Mars with a Sample Program to collect samples from the surface of Mars and return for scientific analysis. |
| Sec. 2640 | Planetary Defense Coordination Office. | Authorizes a Planetary Defense Coordination Office at NASA to survey threats posed by near-Earth objects equal to or greater than 140 meters in diameter. Would require NASA to launch, not later than September 30, 2025, a space-based infrared survey telescope that can detect near-Earth objects equal to or greater than 140 meters in diameter. Timely annual report on their progress toward this goal required. |
| Sec. 2642 | Earth science data and observations. | The Administrator shall make available to the public in an easily accessible database all data of the missions and programs of the Earth Science Division or any successor division. NASA shall also establish and operate an open data program that is consistent with the greatest degree of interactivity, interoperability, and accessibility and enables outside communities, including the research and applications communities, private industry and academia. |
| Sec. 2643 | Sense of Congress on Small Satellite Science. | States NASA should continue to support small satellite research, development, technologies, and programs, including technologies for compact and lightweight instrumentation for small satellites |
| Sec. 2645 | Procedures for Identifying and Addressing Alleged Violations of Scientific Integrity Policy. | No later than 180 days after enactment the Administrator shall develop and document procedures identifying and addressing alleged violations of scientific integrity at NASA |

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| Sec. 2650 | 21 st Century Aeronautics Capabilities Initiative. | The Administrator shall establish the initiative within the Construction and Environmental Compliance and Restoration Account to ensure NASA possesses the infrastructure and capabilities necessary to conduct proposed flight demonstration projects across NASA |
| Sec. 2652 | Sense of Congress on Hypersonic Technology Research. | Sense of Congress that hypersonic tech is critical to development of advanced high-speed aerospace vehicles, for hypersonic vehicles research to overcome technical challenge, NASA plays a critical role in supporting fundamental hypersonic research and the research efforts should complement research supported by DOD |
| Sec. 2653 | Space Technology Mission Directorate. | The Administrator should maintain a Space Technology Mission Directorate consistent with section 702 of the National Aeronautics and Space Administration Transition Act of 2017 (as a separate directorate). |
| Sec. 2660 | Lunar Surface Technologies. | Requires NASA to conduct technology development and demonstrations to enable human and robotic exploration on the lunar surface. In doing so, the agency is required to establish a research consortium to assist in the effort. |
| Sec. 2662 | STEM Education engagement activities. | The Administrator shall continue to provide opportunities for formal and informal STEM education activities within Office of NASA STEM Engagement and other NASA directorates to leverage NASA programs to promote STEM education. One year after enactment the administrator shall brief Congress on the status of the programs, manner by which NASA STEM education engagement activity is organized and funded. |
| Sec. 2663 | Skilled Technical Educational Outreach Program. | The Administrator shall create a program to conduct outreach to secondary schools and expose and encourage students to careers in technical education. |
| Sec. 2664 | National Space Grant College and Fellowship Program. | The Administrator shall carry out a national space grant college program to provide hands-in research, training and education programs with measurable outcomes. The program will be carried out through the space grant consortia. |
| Sec. 2665 | Appointment and Compensation Pilot Program. | Authorizes a limited excepted service pilot program at NASA to accelerate hiring for key positions and compete with the private sector in hiring. |
| Sec. 2666 | Establishment of Multi-institution Consortia. | Directs NASA to establish one or more multi-institution consortia to facilitate access to essential engineering, research and development capabilities in support of NASA missions and use the consortium to fund technical analyses and |

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| | | other engineering support to address acquisition, technical, and operations needs of NASA centers. Eligibility includes institutions of higher education, an operator of a federally funded research center, and a nonprofit research institution. |
| Sec 2667 | Expedited Access to Technical Talent and Expertise | Would clarify that NASA can use multi-institution consortia to fund technical analyses and other engineering support to address the acquisition, technical, and operational needs of NASA centers. |
| Sec. 2676 | Cybersecurity | The Administrator shall update and improve the cybersecurity of NASA space assets and supporting infrastructure and establish a Security Operations Center to respond to threats. |
| Sec. 2677 | Limitation on Cooperation with the People's Republic of China. | Would reaffirm prohibition on NASA and OSTP working on a bilateral basis with China or a Chinese-owned company unless specifically authorized. Bars hosting official Chinese visitors at NASA facilities. Would require certification be submitted to Congress within 30 days for exempted activities. Also would require GAO to review of NASA contracts that may subject the Administration to unacceptable transfers of intellectual property or technology to Chinese entities. |
| Sec. 2678 | Consideration of Issues Related to Contracting with Entities Receiving Assistance from or Affiliated with the People's Republic of China. | Requires entities looking to do business with NASA that involve critical technology to certify that they are in compliance with all applicable export control laws and other laws meant to protect critical technologies. Any entity found to have made a false statement would be disbarred for no less than one year and NASA is required to submit an annual report to Congress on violations. |
| Sec. 2679 | Small Satellite Launch Services Program | Requires NASA to procure dedicated launch services for small satellites for conducting science and technology missions. Would require the agency to engage with the academic community on these opportunities. |
| Sec 2680 | 21 st Century Space Launch Infrastructure | The Administrator shall carry out a program to modernize multi-user launch infrastructure at NASA facilities with projects ranging from infrastructure commodities an enhancement to range capacity. |

Division C: Strategic Competition Act of 2021

| Section | Title | Summary |
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| Sec. 3138 | Review by Committee on Foreign Investment in the United States of certain foreign gifts to and contracts with institutions of higher education. | Expansion of CFIUS review to include certain gifts and contracts between universities and foreign persons. |

Division D: Homeland Security and Governmental Affairs Committee Provisions

| Section | Title | Summary |
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| Sec. 4493 | Federal Research Security Council | Creates a new multi-agency research coordinating council OMB. |
| Sec. 4494 | Federal grant application fraud. | Assesses penalties for failure to disclose receipt of any outside compensation, including foreign compensation by a federal research grant applicant or falsifying information. |
| Sec. 4495 | Restricting the acquisition of emerging technologies by certain aliens. | Acknowledges State's authority to determine if an alien is inadmissible if they are seeking to knowingly acquire sensitive or emerging technologies to undermine national security interests. "Determining factors" section changed to "relevant factors" and mention of "past, current, or intended employment" removed. Provision sunsets 2 years after enactment. |
| Sec. 4497 | Certifications regarding access to export-controlled technology in educational and cultural exchange programs. | Requires J-1 sponsors to certify to State that they comply with export control regulations and licenses are not required for technology that will be accessed by the J-1 visa holder. Requires sponsor to attest that they will prevent access to controlled technology or technical data by the exchange visitor. Sponsors who maintain export-controlled technology/data must submit a technology control plan on how they prevent unauthorized export or transfer. |

Division E: Meeting the China Challenge Act of 2021

| Section | Title | Summary |
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| Sec. 5212 | Prohibition on reviews by Committee on Foreign Investment in the United States of certain foreign gifts to and contracts with institutions of higher education. | Prohibits CFIUS from reviewing or investigating gifts to an IHE from a foreign person. Prohibits use of funds to review or investigate gifts to an IHE from a foreign person (nullifying Sec. 3138) |

Division F: Other Matters (Competitiveness and Security for Education and Medical Research, Committee on the Judiciary Provisions, Miscellaneous)

| Section | Title | Summary |
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| Sec. 6101 | Foreign talent programs. | Requires disclosure of participating in foreign talent programs, consistent with section 2303, as it applies to federal extramural biomedical research funding awarded through HHS. |
| Sec. 6104 | Protecting America's biomedical research enterprise | Requires HHS to identify ways to improve the protection of intellectual property, identify and develop strategies to prevent/mitigate/address national security threats, identify national security risks, and develop a framework to identify emerging areas of interest for state actors that would compromise national security. |
| Sec. 6122 | Confucius Institutes | Prohibits Dept of Education (ED) funding to institutions (except title IV) that maintain a contract or agreement between the institution and a Confucius Institute. Requires ED to consult with NASEM and evaluate any CI contract or agreement and publish an evaluation of the contract on ED's website to confirm protection of academic freedom, prohibits foreign campus law, grants managerial authority to the institution not the CI. |
| Sec. 6124 | Disclosures of foreign gifts and contracts at institutions of higher education | <p>Lowers the Section 117 reporting threshold to \$50,000; provides an annual disclosure date; outlines content of disclosure reporting; addresses sanctions for noncompliance; establishing a single point of contact within the Department of Education</p> <p>Creates a new requirement in Sec. 124 entitled "Institutional Policy Regarding Foreign Gifts and Contracts to Faculty and Staff" and would require universities to ensure that faculty and staff report <u>any</u> gifts from, or contracts, entered into, with a foreign source, and then maintain this information in a searchable database.</p> |

USICA Research Security Provisions of Interest (also listed chronologically above)


***Bolded** items below are the provisions which AAU has identified as most concerning*


| Section | Title | Summary |
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| Section 2302 | Research security and integrity information sharing analysis organization. | Establishes a research security and integrity information sharing analysis organization (RSI-ISAO) to serve as a clearinghouse for information on identifying improper or illegal efforts by foreign entities to obtain research results, know how, materials, and IP and for other purposes. |
| Section 2303 | Foreign government talent recruitment program prohibition. | Prohibits federal research awards from being awarded for any proposal where the principal investigator or other individuals directly involved in the research are members of a foreign government talent recruitment programs sponsored by China, Russia, Iran, or North Korea. |
| Section 2304 | Additional requirements for directorate research security. | Requires NSF to establish an initiative to work with IHEs to support protection of intellectual property, limit undue influence, including through talent recruitment programs, and support efforts toward development of domestic talent in relevant science and engineering fields. |
| Section 2308 | Plan with respect to sensitive or controlled information and background screening. | Requires NSF to develop a plan to identify research areas that may include sensitive or controlled information and provide background screening for individuals working in such research areas who are employed by NSF or are recipients of NSF funds. |
| Section 2525 | Foundation funding to institutions hosting or supporting Confucius Institutes. | Prohibits NSF funding to institutions that maintain a contract or agreement between the institution and a Confucius Institute unless NSF deems a waiver appropriate. |
| Section 2526 | Supporting documents. | Mandates NSF 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. Also requires NSF to collect a detailed description of any financial contributions from the Government of the People’s |
| | | Republic of China or its affiliates to the institution, a foundation of the institution, or related entities. |

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| Section 3138 | Review by Committee on Foreign Investment in the United States of certain foreign gifts to and contracts with institutions of higher education. | Expansion of CFIUS review to include certain gifts and contracts between universities and foreign persons. |
| Section 4493 | Federal Research Security Council. | Creates a new multi-agency research coordinating council at OMB. |
| Section 4494 | Federal grant application fraud. | Assesses penalties for failure to disclose receipt of any outside compensation, including foreign compensation by a federal research grant applicant or falsifying information. |
| Section 4495 | Restricting the acquisition of emerging technologies by certain aliens. | Acknowledges State's authority to determine if an alien is inadmissible if they are seeking to knowingly acquire sensitive or emerging technologies to undermine national security interests. "Determining factors" section changed to "relevant factors" and mention of "past, current, or intended employment" removed. Provision sunsets 2 years after enactment. |
| Section 4497 | Certifications regarding access to export-controlled technology in educational and cultural exchange programs. | Requires J-1 sponsors to certify to State that they comply with export control regulations and licenses are not required for technology that will be accessed by the J-1 visa holder. Requires sponsor to attest that they will prevent access to controlled technology or technical data by the exchange visitor. Sponsors who maintain export-controlled technology/data must submit a technology control plan on how they prevent unauthorized export or transfer. |
| Section 5212 | Prohibition on reviews by Committee on Foreign Investment in the United States of certain foreign gifts to and contracts with institutions of higher education. | Prohibits CFIUS from reviewing or investigating gifts to an IHE from a foreign person. Prohibits use of funds to review or investigate gifts to an IHE from a foreign person. |
| Section 6101 | Foreign talent programs. | Requires disclosure of participating in foreign talent programs, consistent with section 2303, as it applies to federal extramural biomedical research funding awarded through HHS. |

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| Section 6104 | Protecting America’s biomedical research enterprise. | Requires HHS to identify ways to improve the protection of intellectual property, identify and develop strategies to prevent/mitigate/address national security threats, identify national security risks, and develop a framework to identify emerging areas of interest for state actors that would compromise national security. |
| Section 6122 | Confucius Institutes. | Prohibits Dept of Education (ED) funding to institutions (except title IV) that maintain a contract or agreement between the institution and a Confucius Institute. Requires ED to consult with NASEM and evaluate any CI contract or agreement and publish an evaluation of the contract on ED’s website to confirm protection of academic freedom, prohibits foreign campus law, grants managerial authority to the institution not the CI. |
| Section 6124 | Disclosures of foreign gifts and contracts at institutions of higher education. | <p>Lowens the Section 117 reporting threshold to \$50,000; provides an annual disclosure date; outlines content of disclosure reporting; addresses sanctions for noncompliance; establishing a single point of contact within the Department of Education</p> <p>Creates a new requirement in Sec. 124 entitled “Institutional Policy Regarding Foreign Gifts and Contracts to Faculty and Staff” and would require universities to ensure that faculty and staff report <u>any</u> gifts from, or contracts, entered into, with a foreign source, and then maintain this information in a searchable database.</p> |

AAU Funding Tables

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|---|---|--------|--------|--------|--------|--------|--------|
|  Association of American Universities <small>Inquiry · Innovation · Impact</small> | U.S. Innovation and Competition Act Funding Table (as passed by Senate 6.8.21) | | | | | | |
| <i>Authorizations for NSF, DOE, and DARPA included in the Senate-approved version of USICA/EFA</i> | | | | | | | |
| (millions of \$) | FY21 Enacted | FY22 | FY23 | FY24 | FY25 | FY26 | Total |
| National Science Foundation | 8,486 | 10,800 | 12,800 | 16,600 | 19,500 | 21,300 | 81,001 |
| Activities Outside Directorate for Tech and Innovation | -- | 9,000 | 9,600 | 10,300 | 11,100 | 12,000 | 52,000 |
| | with 10% transfer | 9,180 | 9,920 | 10,930 | 11,940 | 12,930 | 54,900 |
| STEM Education/Workforce | -- | 1,000 | 1,190 | 1,600 | 2,100 | 2,540 | 8,431 |
| Directorate for Technology and Innovation | -- | 1,800 | 3,200 | 6,300 | 8,400 | 9,300 | 29,002 |
| | with 10% transfer | 1,620 | 2,880 | 5,670 | 7,560 | 8,370 | 26,102 |
| Innovation Centers (sec. 2104) | -- | 594 | 1,056 | 2,079 | 2,772 | 3,069 | 9,571 |
| Scholarships, Fellowships, other activities (sec. 2106) | -- | 324 | 576 | 1,134 | 1,512 | 1,674 | 5,221 |
| Academic Tech Transfer (Sec. 2109) | -- | 252 | 448 | 882 | 1,176 | 1,302 | 4,061 |
| Test Beds (Sec. 2108) | -- | 180 | 320 | 630 | 840 | 930 | 2,901 |
| R&D Activities (Sec. 2107) | -- | 270 | 480 | 945 | 1,260 | 1,395 | 4,351 |
| Capacity Building (Sec. 2110) | -- | 150 | 150 | 150 | 150 | 150 | 750 |
| *10% transfer to directorates outside of Tech & Innov. | -- | 180 | 320 | 630 | 840 | 930 | 2,901 |
| Department of Energy (research in key tech areas) | -- | 1,000 | 1,800 | 3,700 | 4,900 | 5,500 | 16,902 |
| Defense Advanced Research Projects Agency (DARPA) | -- | 3,500 | 3,500 | 3,500 | 3,500 | 3,500 | 17,500 |

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|---|--|----------|------------|
|  Association of American Universities <small>Inquiry · Innovation · Impact</small> | NASA Appropriations Levels in the U.S. Innovation and Competition Act of 2021 | | |
| (Millions of \$) | FY21 Enacted | FY22 PBR | USICA FY21 |
| NASA Topline | 23,271 | 24,801 | 23,495 |
| Exploration | 6,517 | 6,880 | 6,706 |
| Space Operations | 3,988 | 4,017 | 4,017 |
| Science | 7,301 | 7,301 | 7,242 |
| Aeronautics | 829 | 915 | 829 |
| Space Technology | 1,100 | 1,425 | 1,206 |
| Science, Tech, Engineering, and Mathematics Engagement | 127 | 147 | 120 |
| Safety, Security, and Mission Services | 2,937 | 3,049 | 2,937 |
| Construction and Environmental Compliance and Restoration | -- | -- | 390 |
| Inspector General | -- | -- | 44 |

