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Introduction

This edition of the Tufts Washington Update for late June includes administration, congressional, hearing, and agency updates as well as funding opportunities. Faculty, staff, and researchers are welcome to schedule calls with the Lewis-Burke Tufts team or meet with the team when they visit Washington, DC. Contact Amber Cassady, Lewis-Burke Associates LLC, at amber@lewis-burke.com with any questions or comments related to the Update’s content, for more information on updates and opportunities, or to add a new recipient to the distribution list.
Administration and Congressional Updates

House Passes First Spending Package for Fiscal Year 2020

On June 19, the House passed on a vote of 226-203 a $985 billion spending package—the first for fiscal year (FY) 2020—which combines four of the 12 annual appropriations bills. The four bills include: Defense, Labor-Health and Human Services-Education, Energy-Water, and State-Foreign Operations. The spending package (H.R. 2740) would provide substantial increases for federal research, education, and health programs of interest to the research, higher education, and healthcare communities—most notably for the National Institutes of Health, the Department of Energy’s (DOE) basic and applied research programs, student aid and higher education programs, and Department of Health and Human Services (HHS) programs and initiatives such as health workforce education and training programs and Prevention and Education Research Centers.

However, this spending package represents only House Democratic priorities, with not a single House Republican voting in favor of the package, and it exceeds spending caps set in the Budget Control Act of 2011 by $63.4 billion. The Trump Administration has threatened a veto because the spending package exceeds spending caps and it is opposed to a number of policy provisions, such as no funding for a border wall. While Congressional leaders and the Trump Administration have started discussions on a new budget agreement that would prevent major cuts and boost funding for defense and non-defense programs, to date there is no agreement and the path to passing FY 2020 appropriations bills is still very uncertain. The Senate has not yet marked up or passed any FY 2020 appropriations bills. Senate Appropriations Chairman Richard Shelby (R-AL) has stated that the Senate will start taking up appropriations bills in July if there is no budget agreement in place by July 1, but it is not clear what the Senate will use as funding guidance. Most likely, the Senate Appropriations Committee would use FY 2019 funding levels as the starting point, which is $177 billion below the House levels.

The House voted on 221 amendments that would have changed funding levels or policy provisions for federal programs and projects. Below is a summary of amendments that passed and were adopted in the final spending package of most relevance to the research, higher education, and healthcare communities:

**Defense**

- **Science and Security**: Increases Research, Development, Test and Evaluation, Defense-Wide by $3 million to strengthen efforts to secure science and technology research by decreasing Operation and Maintenance, Defense-Wide by $3 million, introduced by Reps. Mikie Sherrill (D-NJ) and Jim Langevin (D-RI).
- **Education and Workforce Development**: Increases Research, Development, Test, and Evaluation, Defense-Wide by $2 million for civics education grants under the National Defense Education Program. Grants will fund the development and evaluation of civics education programs at Department of Defense domestic schools. The offset is a decrease to Other Procurement, Air Force by $2 million. The amendment was introduced by Rep. Jim Langevin (D-RI).
- **Diversity in Research**:
  - Redirects $4 million within the Defense-wide Research, Development, Test and Evaluation, Defense-Wide account to increase funding for DOD’s Historically Black College and University program with a focus on physical science, mathematics, and engineering programs with national security benefits, introduced by Rep. Andre Carson (D-IN).
• **Science and Technology:**
  o Increases Research, Development, Test, and Evaluation, Defense-Wide by $1.5 million for the Defense Established Program to Stimulate Competitive Research (DEPSCoR) program by decreasing Operation and Maintenance, Space Force by $1.5 million, introduced by Rep. David Cicilline (D-RI).
  o Increases Research, Development, Test, and Evaluation, Army by $4 million to fund university and industry research centers to pursue research in areas of biotechnology such as advances in materials, neuroscience, systems, synthetic biology, nanotechnology and immersive technology by decreasing Operation and Maintenance, Defense-Wide by $4 million, introduced by Reps. Salud Carbajal (D-CA), Judy Chu (D-CA), Norma Torres (D-CA).
  o Redirects $5 million within Research, Development, Test and Evaluation, Defense-Wide to develop lead-free defense electronics to ensure the defense industry can integrate cutting edge civilian technology to meet military requirements, introduced by Reps. Ann McLane Kuster (D-NH) and Brad Schneider (D-IL).
  o Increases Research, Development, Test, and Evaluation, Army by $9 million to increase funding for the Future Vertical Lift Advanced Technologies program from $16 million to $25 million above the budget request by decreasing Operation and Maintenance, Defense-Wide by $9 million, introduced by Rep. Marc Veasey (D-TX).

• **DOD Health and Medical Research:**
  o Increases DOD’s Defense Health Program account by $2 million for tickborne disease research by decreasing Operations and Maintenance, Defense-Wide by $2 million, introduced by Rep. Christopher Smith (D-NJ).
  o Redirects $9.5 million within the Research, Development, Test and Evaluation, Air Force account to develop flexible imaging technologies, wearable biochemical sensing, point-of-care in low-resource environments, and en-route medical technologies to treat wounded warfighters, introduced by Rep. Anna Eshoo (D-CA).
  o Increases DOD’s Defense Health Program by $2 million for peer-reviewed pancreatic cancer research by decreasing Defense-wide Operation and Maintenance by $2 million, introduced by Reps. Anna Eshoo (D-CA) and David McKinley (R-WV).
- Increases Research, Development, Test, and Evaluation, Army by $4.8 million to support mitigating musculoskeletal injury risk and optimizing bone and muscle adaptation for military physical training by decreasing Research, Development, Test, and Evaluation, Defense-Wide by $4.8 million, introduced by Reps. Joe Wilson (R-SC), Conor Lamb (D-PA), Mike Doyle (D-PA).

**Health and Human Services**

- **National Institutes of Health (NIH):**
  - Requires a National Cancer Institute (NCI) study on how to improve communication between cancer care providers, cancer patients, and survivors, introduced by Rep. Mark DeSaulnier (D-CA).
  - Increases funding for the National Institute of Allergy and Infectious Disease by $3 million to support the Consortium of Food Allergy Research, introduced by Rep. Ro Khanna (D-CA).

- **Regional Centers of Excellence in Substance Use Disorder Education:** Provides $2 million to establish Regional Centers of Excellence in Substance Use Disorder Education consistent with Section 7101 of the SUPPORT for Patients and Communities Act by cutting $2 million from HHS’s General Departmental Management account, introduced by Reps. Bill Johnson (R-OH) and Paul Tonko (D-NY).

- **Biosecurity:** Increases the Biomedical Advanced Research and Development Authority account by $1 million to support increased R&D for biosecurity by cutting $1 million from HHS’s General Departmental Management account, introduced by Rep. Bill Foster (D-IL).

- **Suicide prevention:**
  - Increases funding for the Substance Abuse and Mental Health Services Administration (SAMHSA) by $6.5 million to support youth suicide prevention strategies by cutting $6.5 million from SAMHSA’s Health Surveillance and Program Support account, introduced by Rep. Emanual Cleaver (D-MO).
  - Increases SAMHSA’s mental health account by $2 million to support the Garrett Lee Smith-Youth Suicide Prevention State and Campus grants by cutting $2 million from SAMHSA’s Health Surveillance and Program Support account, introduced by Rep. Patrick Murphy (D-FL) and co-sponsored by 25 other Members.

- **Fetal tissues research:** Prohibits the implementation of a new HHS policy announced on June 5, 2019, that would restrict fetal tissue research, introduced by Rep. Mark Pocan (D-WI) and co-sponsored by 9 other Members.

- **Maternal and child health:** Increases funding for the Health Resources and Services Administration (HRSA) Bureau of Maternal and Child Health by $7 million by cutting $7 million from HRSA’s Program Management account, introduced by Rep. Cedric Richmond (D-LA).

- **Graduate medical education:** Increases funding for Graduate Medical Education by $5 million by cutting $5 million from the Department of Education’s Program Administration account., introduced by Reps. Susie Lee (D-NV) and Katie Porter (D-CA).

**Education**

- **Office of Civil Rights:** Prohibits funds from being used to limit the functions of the Department of Education Office for Civil Rights, introduced by Rep. Hakeem Jeffries (D-NY).

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Prepared by Lewis-Burke Associates LLC
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• **National Center for College Students with Disabilities**: Increases funding within the Higher Education account by $500,000 to keep open the National Center for College Students with Disabilities by decreasing funding for the Department of Education’s Program Administration account, introduced by Reps. Alma Adams (D-NC), Jared Huffman (D-CA), Susan Davis (D-CA), Seth Moulton (D-MA), Suzanne Bonamici (D-OR), and Alan Lowenthal (D-CA).

**Energy-Water**

• **Advanced Research Projects Agency-Energy (ARPA-E)**: Increases funding for ARPA-E by $3 million for a total of $428 million by decreasing DOE’s Departmental Administration funds by $3 million, introduced by Rep. Susie Lee (D-NV).

• **Climate change**: Prevents funds from being used to reject any application for a grant that uses the terms “global warming” or “climate change” in the application, introduced by Reps. Brendan Boyle (D-PA) and Katie Porter (D-CA).

• **Nuclear energy**:
  - Creates a pilot program to site, build, and operate a micro nuclear reactor at a DOD or DOE site to test the technology and improve the energy resiliency of the site, introduced by Rep. Richard Hudson (R-NC).
  - Increases funding for the Office of Nuclear Energy by $3 million for a total of $1.321 billion, introduced by Rep. Michael Cloud (R-TX).

• **Office of Science**: Provides an additional $15 million to support operations of Argonne National Laboratory’s Leadership Computing Facility, which could have an impact on research budgets, introduced by Reps. Dan Lipinski (D-IL) and Bill Foster (D-IL).

• **Renewable energy**: Increases funding for the Office of Energy Efficiency and Renewable Energy by $7 million for a total of $2.659 billion, with $2 million specifically for the Water Power Technologies Office introduced by Rep. Scott Perry (R-PA).

• **Fossil energy**: A number of amendments were introduced to increase funding for fossil energy research and development, but fossil energy research and development was also used as an offset for increases to renewable energy and energy efficiency programs. After taking into account all of the increases and decreases, funding for fossil energy research and development would decrease by $1.4 million for a total of $738.6 million.

**Sources and Additional Information:**

• The bill text, explanatory report, and full list of amendment is available at [https://rules.house.gov/bill/116/hr-2740#rule-information](https://rules.house.gov/bill/116/hr-2740#rule-information).

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**House and Senate Armed Services Committees Approve FY 2020 National Defense Authorization Bills**

Both the House and Senate Armed Services Committees have approved their versions of the fiscal year (FY) 2020 National Defense Authorization Act (NDAA), paving the way for full consideration in their respective chambers in the coming weeks. Both bills include authorized funding and provisions aimed at aligning technology development with policy formulation; increasing support for scientific research on artificial intelligence/machine learning, quantum information sciences, hypersonics, and biotechnology; strengthening efforts to develop the STEM workforce and promote diversity; and protecting the defense research enterprise from foreign influence.
On May 22, the Senate Armed Services Committee (SASC) considered its fiscal year (FY) 2020 National Defense Authorization Act (NDAA) in a closed session and officially reported the bill to the full Senate on June 11. The House Armed Services Committee (HASC) approved its FY 2020 NDAA on a party line vote of 33-24 early June 13 after nearly 21 hours of debate. The bill will move to the House floor, but Democratic and Republican lawmakers’ disagreements over topline funding for the Department of Defense (DOD) as well as other contentious issues, such as nuclear policy, are likely to reemerge in the next phase. The NDAA is typically a bipartisan, annually-passed bill that authorizes spending and sets policy for the Department of Defense (DOD). If passed prior to the end of the fiscal year on September 30, this would be the 59th consecutive year the bill has been passed by Congress.

The SASC NDAA would authorize RDT&E at $104 billion and the HASC NDAA would authorize RDT&E at $100.7 billion, a 13.4 and 9.8 percent increase, respectively, above the FY 2019 NDAA-enacted level. The notable difference between the two versions is the Senate’s continued support for the President’s priorities and top-level funding number of $750 billion, while the House bill would authorize funding at $733 billion. The House bill demonstrates HASC Chairman Adam Smith (D-WA)’s priorities, including limiting the proliferation of nuclear weapons and forbidding military construction funds to be used to construct a wall along the southern border. In a win for universities and the research community, the HASC NDAA would reject the Administration’s proposed cuts to basic and applied research, and the SASC NDAA would provide increases to basic research (6.1) for the Army, Air Force, and Defense-wide accounts. The House and Senate bills continue to support many of the research priorities evangelized by Under Secretary of Defense for Research and Engineering (USD(R&E)) Mike Griffin. Both NDAA bills prioritize efforts in cybersecurity through varying provisions and show a concern for the future of the defense workforce and responding to emerging threats and technical capabilities.

The NDAA authorizes funding for DOD programs, but it is ultimately up to the House and Senate Appropriations Committees to allocate funds for FY 2020. The House Appropriations Committee has made quick work of its appropriations bills and approved the DOD spending bill on May 21. This bill included a 6.1 percent increase for Research, Development, Test, and Evaluation (RDT&E). The Senate has been slow to start its appropriations process because Senate Appropriations Committee Chairman Richard Shelby (R-AL) was hoping a budget deal to raise the statutory budget caps would be completed prior to the start of the appropriations process. Regardless of whether a deal is reached, Chairman Shelby is expected to begin considering appropriations bills in the Senate next week.

At the start of the HASC mark-up on June 12, Chairman Smith and Ranking Member Mac Thornberry (R-TX) stressed the strong history of bipartisanship within the Committee and the need to continue strong working relationships moving forward. However, in the end, the bill’s passage was complicated by partisan disagreements over topline funding for the Department, as well as other issues pertaining to Guantanamo Bay and using DOD funds to support the construction of a barrier along the southern border. Ranking Member Thornberry raised concern with the $733 billion top-level funding, instead of the $750 billion proposed in the President’s budget request, underlining the importance of budgetary growth for the Department to meet national security needs, while Chairman Smith countered that any added funding must have a proposed offset.

The Committee addressed the role that universities and scientific research play in supporting the Department. Chairman of the Intelligence and Emerging Threats and Capabilities Subcommittee James Langevin (D-RI) stressed the importance of STEM and cyber education to the future of DOD’s technical capabilities, while the Subcommittee’s Ranking Member Elise Stefanik (R-NY) noted how basic research

Tufts Washington Update
Prepared by Lewis-Burke Associates LLC
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supports the Department’s technical mission and applauded the role of universities in the research enterprise.

Surprisingly, there was limited discussion of science and security during the HASC mark-up. One amendment was accepted, sponsored by Rep. Mikie Sherrill (D-NJ), that would create an interagency working group to coordinate activities to protect federally funded research and development from foreign interference. The SASC bill would direct the Department to provide a briefing to both HASC and SASC on DOD’s cooperative technology programs with any country that has significant cooperation with China or Russia, in light of concerns about risks of illicit technology transfer.

**HASC NDAA**
The House bill supports doubling the investment in artificial intelligence/machine learning (AI/ML) already made by the Joint Artificial Intelligence Center (JAIC), in addition to a provision requiring DOD to produce an AI Education Strategy. The HASC bill also extends the National Security Commission on AI, which earned praise from Emerging Threats Subcommittee Ranking Member Stefanik for its efforts to quickly provide recommendations on AI needs for U.S. National Security. The HASC bill continues to support the establishment of cyber institutes at military colleges as authorized in the FY 2019 NDAA. Other HASC provisions include:

- Direct DOD to study the impacts of negative real budget growth on its technological edge
- Create a process to continually update emerging technology priorities as the rate of increases in scientific and technical progress
- Direct DOD to assess their current STEM workforce and the representation of women and underrepresented minorities and to prioritize research collaborations with historically black colleges and universities (HBCUs) and minority serving institutions (MSIs) and increase funding for basic research at HBCU/MSI by $20 million
- Add civics education as a topic to the National Defense Education Program and authorize $20 million to support related projects
- Funding increases of $12 million for Army University and Industry Research Centers
- Funding increases of $5 million for Navy Defense University research initiatives
- A funding increase of $10 million for Air Force Educational Partnership Agreements for aerospace propulsion

**SASC NDAA**
The SASC bill would direct DOD to complete a roadmap regarding the cyber research needed to fulfill the Department’s technical needs. Related to quantum, the SASC bill would amend the Department’s Quantum Information Science and Technology Research and Development program to encourage greater cross-agency collaboration and partnerships with the private sector at home and abroad. Other research priorities seen in the HASC and SASC bills and discussed in the HASC mark-up include 5G communications, additive manufacturing, hypersonics, and biotechnologies. The SASC NDAA would also:

- Establish a technology and national security fellowship program to integrate civilians with STEM expertise into relevant positions in DOD and Congress
- Report on the current and future applications of biotechnologies and how to coordinate research across the department
- Increase Army Defense Research Sciences (6.1) by $5 million for Counter UAS University Research
• Add $5 million for Cyber basic research in the Army and $10 million for Cyber basic research in the Navy
• Add $10 million for the Defense Established Program to Stimulate Competitive Research (DEPSCOR) program

Sources and Additional Information:

• The House FY 2020 NDAA report is available at: https://docs.house.gov/meetings/AS/AS00/20190612/109540/BILLS-116HR2500ih.pdf.
• The House Armed Services Committee Subcommittee on Intelligence and Emerging Threats and Capabilities report for the FY 2020 NDAA is available at: https://docs.house.gov/meetings/AS/AS00/20190612/109540/BILLS-116HR2500ih-IETC.pdf.
• The Senate FY 2020 NDAA report is available at: https://www.congress.gov/116/bills/s1790/BILLS-116s1790rs.pdf.
• A full recording of the HASC mark-up is available at: https://armedservices.house.gov/hearings?ID=A6163CC7-FA2A-4730-9B37-9DBEBB8A374A.
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<td>RDT&amp;E, total</td>
<td>91,727,403</td>
<td>100,706,668</td>
<td>104,023,113</td>
<td>8,979,265 (9.8%)</td>
<td>12,295,710 (13.4%)</td>
<td>3,316,445 (3.3%)</td>
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<td>S&amp;T, Total</td>
<td>13,952,988</td>
<td>14,466,911</td>
<td>14,459,561</td>
<td>513,923 (3.7%)</td>
<td>506,573 (3.6%)</td>
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<td>6.1, Total</td>
<td>2,330,706</td>
<td>2,382,019</td>
<td>2,364,019</td>
<td>51,313 (2.2%)</td>
<td>33,313 (1.4%)</td>
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<td>6.2, Total</td>
<td>5,178,879</td>
<td>5,457,027</td>
<td>5,397,527</td>
<td>278,148 (5.4%)</td>
<td>218,648 (4.2%)</td>
<td>-59,500 (1.1%)</td>
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<td>6.3, Total</td>
<td>6,443,403</td>
<td>6,627,865</td>
<td>6,698,015</td>
<td>184,462 (2.9%)</td>
<td>254,612 (4.0%)</td>
<td>70,150 (1.1%)</td>
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<td>Army RDT&amp;E</td>
<td>9,961,550</td>
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<td>12,344,126</td>
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<td>2,382,576 (23.9%)</td>
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<td>940,490</td>
<td>938,490</td>
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<td>1,166,564</td>
<td>1,148,564</td>
<td>83,366 (7.7%)</td>
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<td>Navy RDT&amp;E</td>
<td>18,384,533</td>
<td>19,796,158</td>
<td>20,061,759</td>
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<td>1,677,226 (9.1%)</td>
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<td>Navy 6.1</td>
<td>622,378</td>
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<td>Navy 6.2</td>
<td>912,491</td>
<td>1,006,453</td>
<td>955,453</td>
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<td>790,296</td>
<td>772,560</td>
<td>741,210</td>
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<td>-49,086 (6.2%)</td>
<td>-31,350 (4.1%)</td>
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<td>40,677,937</td>
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<td>46,335,775</td>
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<td>5,657,838 (13.9%)</td>
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<td>522,819</td>
<td>529,761</td>
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<td>6,942 (1.3%)</td>
<td>6,942 (1.3%)</td>
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<td>Air Force 6.2</td>
<td>1,356,842</td>
<td>1,460,626</td>
<td>1,442,126</td>
<td>103,784 (7.6%)</td>
<td>85,284 (6.3%)</td>
<td>-18,500 (1.3%)</td>
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<td>Air Force 6.3</td>
<td>857,297</td>
<td>879,153</td>
<td>1,066,153</td>
<td>21,856 (2.5%)</td>
<td>208,856 (24.4%)</td>
<td>187,000 (21.3%)</td>
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<td>Defense Wide RDT&amp;E</td>
<td>22,471,474</td>
<td>24,636,505</td>
<td>25,060,253</td>
<td>2,165,031 (9.6%)</td>
<td>2,588,779 (11.5%)</td>
<td>423,748 (1.7%)</td>
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<td>Defense Wide 6.1</td>
<td>722,114</td>
<td>769,300</td>
<td>751,300</td>
<td>47,186 (6.5%)</td>
<td>29,186 (4.0%)</td>
<td>-18,000 (2.3%)</td>
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<td>Defense Wide 6.2</td>
<td>1,964,937</td>
<td>2,049,458</td>
<td>2,061,458</td>
<td>84,521 (4.3%)</td>
<td>96,521 (4.9%)</td>
<td>12,000 (0.6%)</td>
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<td>Defense Wide 6.3</td>
<td>3,712,612</td>
<td>3,809,588</td>
<td>3,742,088</td>
<td>96,976 (2.6%)</td>
<td>29,476 (0.8%)</td>
<td>-67,500 (1.8%)</td>
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<td>Defense Health R&amp;D</td>
<td>673,215</td>
<td>757,273</td>
<td>732,273</td>
<td>84,058 (12.5%)</td>
<td>59,058 (8.8%)</td>
<td>-25,000 (3.3%)</td>
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House Appropriations Committee Approves FY 2020 Homeland Security Spending Bill

On June 11, the House Appropriations Committee approved its version of the fiscal year (FY) 2020 Homeland Security spending bill on a party-line vote. The bill includes $63.8 billion in gross discretionary funding for the Department of Homeland Security (DHS), which represents an increase of 3.6 percent above the FY 2019 enacted level. For the DHS Science and Technology Directorate (S&T), the House bill would provide $665.7 million, which is $154 million below the FY 2019 enacted level but $83.6 million above the President’s FY 2020 budget request. Within this amount, the House bill would sustain $40.5 million in funding for the Office of University Programs (OUP) to maintain 10 university-based Centers of Excellence (COEs), rejecting the President’s proposed drastic cuts to the program.

The markup of the bill was collegial but contentious at times as Members from both parties disagreed over how to address immigration issues at the southern border. While the Committee collaborated on hundreds of bipartisan requests for legislative language, the conversation during markup of the bill was dominated by disagreements over provisions to curtail the Trump Administration’s immigration enforcement priorities. Of note, the bill would restrict several of the Administration’s most controversial proposals on this front, including limiting travel ban enforcement, restricting immigration raids in locations such as universities, further protecting recipients of the Deferred Action for Childhood Arrivals (DACA) program, and cutting all funding for the President’s proposed wall along the border, for which the Administration requested $8.8 billion in its FY 2020 budget request. Republicans on the Committee were quick to point out that omitting funding for a border wall in consideration of FY 2019 appropriations led to an extended partial government shutdown and that it could happen again.

On the research front, the bill also directs the Administration to inform the Committee of any plans to “reduce funding for, diminish the role of, or eliminate COEs prior to taking any action to do so.” The explanatory report further encourages S&T to partner with universities to support research in priority areas, such as maritime security, cross-border threat screening, unmanned systems, counterterrorism, emerging analytics, cybersecurity, first responder safety, disaster-driven displacement, and critical infrastructure. The Committee also lists various research and development (R&D) priorities for S&T, including:

- Develop advanced sensors for first responder technologies.
- Fund research and development at Department of Energy (DOE) National Labs in coordination with the National Biodefense Analysis and Countermeasure Center to “provide mission support at the lower technology readiness levels for biothreat characterization.”
- Continue the “Bi-National Cooperation Pilot,” which promotes “cooperative efforts on border security, maritime security, biometrics, cybersecurity, and video analytics.” This could refer to the Binational Industrial Research and Development (BIRD) Foundation, a program developed by DHS and the Israeli Ministry of Public Security to address emerging threats.
- Develop secure composite shipping containers that improve sensor integration and reduce costs.
- Provide updates on resources needed for countering Small Unmanned Aerial Systems (sUAS) operations at the DHS sUAS demonstration site in Mississippi.
- Invest in research to assist law enforcement in understanding and countering violent extremism.
- Develop cost efficient and effective sensor technologies to support small utility companies through the establishment of “a testbed to evaluate technologies, analytic tools, and proposed...
cybersecurity solutions to mitigate cybersecurity threats across the utility sector and a platform for sharing information related to testbed activities.”

- Enter a multi-agency pilot for public broadcasters to demonstrate datacasting technologies.
- Explore Intelligent Memory Fabric as a “modular, scalable, and distributed technology that could maintain and support agency resources from data centers to field levels.”
- Continue the Educational Partnership Agreement between the U.S. Army Corps of Engineers Engineering Research Development Center (ERDC) and “an academic sedimentation lab that has experience in cooperative research with the U.S. Department of Agriculture’s Natural Resources Conservation Service” to develop capabilities for maintaining levee and dam systems.
- Research and develop wind and solar powered unmanned vessels with surface and subsurface capabilities to assist in port and coastal surveillance and oceanographic research.
- Collaborate with Army’s ERDC and its university partners to develop technologies and processes to protect soft targets and crowded places.
- Develop technologies to combat the criminal practice of “spoofing” to commit fraud over the phone.
- Leverage predictive analytics, such as “advanced artificial intelligence and machine learning, and new data collection methodologies, such as crowd sourcing,” to identify high-risk ignition locations for wildfires.

Finally, the bill would also provide significant investments in the new Cybersecurity and Infrastructure Security Agency (CISA), including more than $24 million for cybersecurity research to be carried out in partnership with S&T. In the bill report, Congress also expresses concern over the growing cybersecurity workforce gap, and charges CISA with reporting on ongoing federal efforts to address the issue.

### House Homeland Security Appropriations Bill, FY 2020

(In thousands of $)

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**Sources and Additional Information:**

White House Announces Executive Order to Decrease Regulatory Burden on Agricultural Biotechnology

On June 11, President Trump announced a new executive order (EO), “Modernizing the Regulatory Framework for Agricultural Biotechnology Products,” intended to enhance coordination across relevant agencies and decrease the regulatory burden associated with agricultural biotechnology. The EO directs the U.S. Department of Agriculture (USDA), the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA) to streamline regulations and promote innovation and public confidence in both regulations and products. The EO defines agricultural biotechnology as a plant, animal or derived product developed through genetic engineering or through “targeted in vivo or in vitro manipulation of genetic information, with the exception of plants or animals, or the products thereof, developed for non agricultural [sic] purposes, such as to produce pharmaceutical or industrial compounds.”

The EO recommends that agencies base decisions on scientific and technical evidence, to review applications in a timely and efficient process, ensure “transparency, predictability, and consistency of the regulation of products of agricultural biotechnology,” make regulatory determinations based on “risks associated with the product” and “intended use,” and urge trade partners to “adopt science- and risk-based regulatory approaches.” Agency leadership has been given 180 days to identify regulations that can be streamlined and to use existing authority to exempt “low-risk” products from undue regulation. The EO builds on the recommendations released by the Interagency Task Force on Agriculture and Rural Prosperity in January 2018.

EPA, FDA, and USDA currently steward the Coordinated Framework for the Regulation of Biotechnology, which was established in 1986 and gives distinct roles to each agency in the oversight of products encompassing human, animal, plant, and environmental health. These roles and associated reporting requirements can often be complex for stakeholders attempting to certify new products. As such, the EO also tasks the agencies with the creation of an online portal that can more easily connect researchers and product developers with relevant resources. Additionally, the EO charges the agencies with developing a domestic engagement strategy to build public trust in biotechnology that supports research and education on effective science communication, integrates biotechnology into science education, creates “consumer facing web content,” and develops materials that communicate the safety and benefits of biotechnology. This strategy will involve coordination between USDA and state level agriculture departments.

Sources and Additional Information:

- A White House press release on the EO is available at https://www.whitehouse.gov/briefings-statements/president-donald-j-trump-is-unleashing-innovation-for-american-farmers/.

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Hearing Updates

House Science Committee Holds Hearing on Combating Sexual Harassment

On June 12, the House Science, Space, and Technology Committee held a hearing on “Combating Sexual Harassment in Science.” In her opening statement, Chairwoman Eddie Bernice Johnson (D-TX) remarked on the long-standing issue of sexual harassment in the sciences, noting cultural challenges, lack of transparency, and an incentive structure for early career researchers to stay quiet.

The hearing delved into the ongoing study by the U.S. Government Accountability Office (GAO) on sexual harassment in STEM and federal research agency policies for grantees and interagency information sharing. John Neumann, Managing Director of Science, Technology Assessment and Analytics at GAO, testified that the agency’s initial findings indicate a range of policies and resources to address sexual harassment across the five research agencies under their review. He mentioned National Science Foundation’s (NSF) new terms and conditions policy for grantees to report on harassment and remarked that the National Aeronautics and Space Administration (NASA) would soon incorporate the same requirement. Mr. Neumann added that, of the agencies reviewed, NSF, NASA, and the National Institutes of Health (NIH) provide the most detailed sexual harassment guidelines and invest in communicating the policies to stakeholders. In contrast, policies at the Department of Energy (DOE) and Department of Agriculture (USDA) are more general and the agencies provide less instructive materials. GAO intends to release their final report and recommendations later this year.

Another major topic was H.R. 36, the Combating Sexual Harassment in Science Act, which was introduced at the beginning of 2019 and co-sponsored by Chairwoman Johnson, Ranking Member Frank Lucas (R-OK), and 87 other House members. The bill would expand NSF’s research and data on sexual harassment in STEM, call for the National Academies to develop a conduct guide, and direct the Office of Science and Technology Policy (OSTP) to coordinate federal agency efforts to respond to and prevent harassment. University witnesses reiterated general support for the bill and urged a clear set of uniform policies across federal agencies.

Several committee members remarked on the need for culture change to encourage women to continue along STEM pathways. The witnesses from Boston University and the University of California, Davis highlighted recent institutional efforts to change the culture of academic research, such as parental leave, tenure clock modifications, and personal conduct training. Both institutions were among the first awardees of the American Association for the Advancement of Science (AAAS) STEM Equity Achievement (SEA) Change program.

Overall, the hearing reflected bipartisan support for moving the research agencies toward a more substantial and coordinated approach to address sexual harassment among federal grantees. The committee leadership also indicated willingness to hear from stakeholders on possible improvements to H.R. 36.

Sources and Additional Information:

- A recording of the full hearing, along with written testimony, can be found at https://science.house.gov/hearings/combating-sexual-harassment-in-science.
• The U.S. GAO Preliminary Observations on Sexual Harassment in STEM Research analysis is available at https://www.gao.gov/products/GAO-19-583T.

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Agency Updates and Funding Opportunities

National Institutes of Health Advisory Committee to the Director Grapples with Sexual Harassment,
Foreign Influence

National Institutes of Health (NIH) Director Francis Collins opened his remarks to the June 13-14 Advisory Committee to the Director (ACD) by stating, “It has been an intense six months since we last met,” which is an understatement to put it mildly. The ACD is an external stakeholder group that is intended to represent a broad cross-section of the biomedical research community and provide input to the Director in the interest of supporting and promoting the agency and research enterprise. However, over the past year multiple issues have been elevated that critically threaten research integrity, such as the pervasiveness of sexual harassment in research culture and the threats posed by foreign influence. During the Congressional update, Associate Director for Legislative Policy and Analysis Adrienne Hallet stressed that foreign influence and sexual harassment have resulted in NIH’s Congressional critics as well as champions pushing NIH to do more and to take these issues very seriously. Much of the meeting was devoted to these priorities and the subsections below summarize the conversations and expected impacts on the research community on these topics, as well as others.

Foreign Influence on Biomedical Research
The Foreign Influence on Research Integrity ACD Working Group submitted its final report to the committee in December 2018. However, the issue itself has not gone away and biomedical research community faces mounting pressure from Congress to address this issue. The NIH has identified three types of activity that detrimentally impact the research community and national security as well as economic security: the diversion of intellectual property to foreign entities, peer review violations, and undisclosed foreign financial conflicts of interest or conflicts of commitment. At this point, approximately 60 institutions have been identified as housing faculty that have committed infractions that fall somewhere on the spectrum of accidental oversight to criminal activity. NIH Deputy Director for Extramural Research Mike Lauer shared the efforts NIH has been undertaking following the December recommendations from the working group, as well ongoing conversations with other federal funding agencies.

Dr. Lauer stressed the balance NIH is striving for, that there is the need to encourage and support international collaboration, while also striving to change the elements that have enabled a handful of individuals to engage in egregious behavior and the theft of time, ideas, and intellectual property. Dr. Lauer has repeatedly stressed that NIH’s intent is to mitigate these risks, not criminalize them. Efforts are underway to re-evaluate existing policies and forms to improve transparency. In addition, NIH is considering adopting the web-based portal that the National Science Foundation (NSF) has created to make it easier to disclose work being performed in conjunction with foreign entities.

Sexual Harassment Policy
Another challenging issue NIH is confronting is developing policies that help change the culture of academic research and reduce the risks of gender-based harassment in the scientific ecosystem that contribute to individuals leaving research careers. NIH’s Associate Director for Science Policy and Acting Chief of Staff Carrie Wolinetz stated in her introduction to the presentation on the activities of the ACD Working Group on Changing the Culture to End Sexual Harassment that, “Despite the fact that this is hard and this is difficult, we cannot shy away from this conversation.”
Following a series of public and private listening sessions with targets of and survivors of sexual harassment, the ACD Working Group produced four major interim recommendations that would impact both NIH as well as research institutions.

1. *Treat professional misconduct, including sexual harassment, as seriously as research misconduct.* Efforts are underway within NIH to establish a Standard Operating Procedure (SOP) to help respond to reports and investigations, and NIH was encouraged to coordinate with other federal agencies so there is consistency in how the federal government responds to these issues. From the research community side, institutions would be required to update the agency within a week of the initial report of harassment, as well as within a week of the conclusion of the investigation and findings.

2. *Require all PIs to attest, when submitting NIH grant applications and progress reports, that they have not violated, and will not violate, their institutional code of conduct.* The statute of limitations would be seven years in terms of previous violations, and the PIs would only be required to indicate if they were formally found to have been guilty of a violation. PIs would not be required to disclose if there is a current investigation pending involving them.

3. *Establish mechanisms for restorative justice for survivors and to recapture lost talent.* There is an existing NIH grant mechanism for workforce re-entry, and this would be an extension of that. This recommendation would also require all new NIH funding opportunities to include a path for the re-entry of researchers who were victims of sexual assault.

4. *Develop novel approaches to address investigator independence from their mentors.* One option would be a two-mentor model. Another idea would be a new grant mechanism to support trainees independent of their PI.

There were several interesting takeaways from the presentation and ensuing conversation. This is not merely, for example, an extramural research community problem; in 2018 NIH reviewed 35 allegations from the intramural community, but through the first five months in 2019, they’ve already received information about 171 allegations. Unfortunately, this is not an encouraging data point. The Working Group co-chairs also made the point that most of the individuals they heard from at the listening sessions were victimized twice, one by harasser and then again by the process. In addition to the recommendations above, the working group will be reviewing several additional considerations, including guidelines to promote safety at NIH-supported conferences, supporting more research on evidence-based interventions in this space, and requiring risk mitigation plans to promote the safety of researchers covered by the grant as part of NIH applications.

**New ACD Working Group on “Rigor and Reproducibility for Animal Models”**

In his opening address, Director Collins indicated that NIH is forming a new working group focused on reproducibility and rigor in animal studies. Some of this is guided by language in the 21st Century Cures Act, as well as a general focus on this issue. The working group will be charged with identifying gaps and opportunities to improve translational validity, evaluating how animal models of disease are currently developed, modeling the financial implications for balancing the number of animals required for specific projects with the necessary statistical power to draw conclusions, and determining if sufficient rigor in animal research is incorporated into academic training. Any faculty interested in serving on this working group should contact NIH Principal Deputy Director Larry Tabak.

**BRAIN Initiative 2.0**

Over the past year, a variety of town hall meetings, workshops, and WebEx conferences were conducted with the ACD BRAIN Initiative Working Group 2.0 and other stakeholders to evaluate the progress made
to date on the BRIAN Initiative and to put together a final report with recommendations for future investments through 2025. In general the group was very supportive of the progress made in most of the original seven goals and felt the activities to date have fulfilled the initial vision of promoting five years of technology development followed by five years of applying that technology to understand how circuit function creates thoughts, cognitive function, and behavior. The group highlighted areas where technology needs require continued investment, especially for invasive and non-invasive technology for studying the human brain. They also proposed the addition of a new funding priority focused on the organization of science, which would include a better focus on data sharing standards.

Following their report, the BRAIN 2.0 Neuroethics SubGroup offered their report which was met with a fair amount of contention from the ACD. Responding to the presentation, the ACD members articulated concerns about everything from the proposal of additional oversight of animal research without the inclusion of any veterinarians or animal specialists contributing to the report, to concerns about how much it really costs to conduct research that is more philosophical in nature. As a consequence, the approval of BRAIN 2.0 has been tabled for a month while the Neuroethics group revises their report. Earlier in the ACD meeting, Collins mentioned that they are hopefully close to completing the search for a BRAIN Initiative director, a venture that has been going for the last several years.

**New High-Risk, High-Reward Program**

In his opening remarks, Collins also announced a new funding opportunity for early career faculty which will not require preliminary data. The award, expected to roll out sometime in 2020, will be an R01 named in honor of Dr. Stephen Ira Katz, Director of the NIH’s National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) who passed away unexpectedly this year and was a strong advocate for high-risk, high-reward opportunities.

**Artificial Intelligence in Biomedical Research**

The ACD Working Group on Artificial Intelligence presented their interim report on how NIH should be leveraging artificial intelligence, machine learning, and deep learning to advance biomedical research and improve healthcare cost and delivery. The group recommended five goals for the NIH that included doing a better job of creating data that is appropriately curated and annotated to be usable for AI approaches; creating multi-lingual researchers (i.e. individuals with expertise beyond just biomedicine and computer science, who they regard as bilingual); addressing the ethical, legal, and social implications of AI to ensure bias is minimized; promoting funding opportunities to encourage the exploration of AI applications to biomedicine, public health, and healthcare delivery and management; and identifying areas for AI applications that are deployable given the current state of technology. The committee received the report enthusiastically although many comments betrayed a major challenge for biomedical applications with AI—how to best incorporate these technologies into patient care. There was no discussion of how NIH might fund any new initiatives on AI in biomedicine. The AI Working Group will present its final recommendations to the ACD in December.

**Sources and Additional Information:**

- The webcast of the meeting and reports are available at [https://acd.od.nih.gov/meetings.html](https://acd.od.nih.gov/meetings.html).
Department of Defense Releases Funding Opportunity Announcement for Vannevar Bush Faculty Fellowship

The Department of Defense (DOD) released June 18 the fiscal year (FY) 2020 Vannevar Bush Faculty Fellowship (VBFF) funding opportunity announcement (FOA). The VBFF program is intended to attract and engage the best and brightest in academia to conduct a range of basic, unclassified research in areas of interest to DOD. DOD also utilizes the VBFF program to foster long-term relationships with outstanding academic researchers and increase the number of technical experts working on defense-related problems. DOD is particularly interested in ambitious “blue sky” research that will lead to revolutionary discoveries, new fields of research, or disruption of existing theories. The program solicitation was released by the Office of Naval Research (ONR) and is overseen by the Basic Research Office within the Office of the Under Secretary of Defense for Research & Engineering. DOD will host a webinar on July 10, 2019 to provide a program overview, grant application information, topic areas of interest, and answer general questions (more information regarding the webinar is below).

Proposals are invited in the following DOD basic research areas:

1. **Engineering Biology:** DOD is interested in this research because of potential applications to specialty materials and biological sensing to improve many warfighter capabilities. The solicitation explicitly calls for “innovative and fundamental, basic research that will enable engineering biology through the understanding and controlling of biochemical processes, with the eventual goal of facilitating the engineering of complex natural or synthetic biological systems. Multidisciplinary research, potentially combining theoretical, computational, developmental, systems, physical, biophysical, biochemical, physiological, and/or biomolecular approaches, are likely necessary to make biology a scalable top-down engineering discipline.”

2. **Quantum Information Science (QIS):** DOD requests research for QIS to gain the advantage that quantum phenomena offer to provide revolutionary capabilities improving our foundational understanding of quantum information and processes, physical frameworks to support quantum information, and using quantum physics for detection purposes.

3. **Cognitive Neuroscience:** DOD is interested in basic research that provide insights to the mechanisms of human cognitive skills. The studies can be “theoretical, computational, neuronal, and molecular basic neuroscience research to study the mechanisms of human cognitive skills. In addition, research in neural activity and brain functions for the development of brain-machine interfaces and cognitive processes and demands for warfighters are of interest. Further, DOD states that “revolutionary research is needed to elucidate brain functions, their relationships with neuron structure, network topologies, brain chemistry, towards creating novel approaches in artificial intelligence.”

4. **Novel Engineered Materials:** DOD is focused on research for the discovery of new engineering materials that enable “transformative functionalities” as well as controlling material behaviors under extreme environments. In particular, DOD is looking for research that focuses on exploitation of novel materials’ properties that could impact multiple technologies, engineered materials with behaviors not observed in naturally occurring materials, and materials that include dynamic behavior considerations.
5. **Applied Mathematics (theory and experiments) and Statistics:** DOD seeks mathematical breakthroughs to provide the foundations to address future DOD challenges such as modeling complex network systems, compressive sensing, encryption and authentication, artificial intelligence, deep learning, and constructive mathematics. DOD also states the critical need for “numerical simulation of complex and large-scale physical phenomena associated with natural environments or engineered systems.”

6. **Other fields of research with high potential:** Applicants can submit a research proposal that does not fit into one of the aforementioned categories; all proposals must support DOD research priorities and focus on basic, transformative science that provides new thinking about the phenomena being studied including “combustion at high speed, multi-scale physical processes, propulsion, shielding concepts, etc.”

All awardees will receive the title of VBFF fellow and will be introduced to DOD’s critical research needs through interactions with DOD science and technology leaders, visits to DOD labs, and invitations to technical workshops.

**Due Dates:** White papers are required and due by **August 16, 2019 at 11:59 PM EDT.** Applicants must register on the AcquTrak portal by **August 14, 2019 at 11:59 PM EDT** to submit a white paper. Full proposals will be by invitation only and are due **January 17, 2020 at 11:59 PM EST.**

**Total Funding and Award Size:** DOD anticipates that awards will be made in the form of grants to U.S. institutions of higher education at a maximum award of $3 million over five years. The solicitation does not indicate how many awards DOD intends to make and notes DOD may not allocate fellowships equally among the topics. In FY 2019, 10 awards were made – three for quantum, three for materials/manufacturing, two for cognitive neuroscience, one for physics and one for information/social networks.

**Eligibility and Limitations:** The competition is open to accredited U.S. institutions of higher education (universities) with doctoral degree-granting programs. The program seeks outstanding faculty, who are either a U.S. citizen or permanent resident, with tenure and full-time research staff with the skill, knowledge, and resources necessary to conduct the proposed research as the principal investigator (PI). PIs may submit only one application in response to this funding opportunity. There is no limit to the number of applications an institution may submit.

**Webinar:** The webinar will be held on **July 10, 2019.** The webinar can be accessed as follows:

- **WebEx Meeting**
  - Meeting Number: 734 968 495
  - Password: VBFF2019
  - [https://noblis.webex.com/noblis/j.php?MTID=m3b9d993630478d83e551385b020f4a90](https://noblis.webex.com/noblis/j.php?MTID=m3b9d993630478d83e551385b020f4a90)

  Join by Video System
  - Dial: [734968495@noblis.webex.com](mailto:734968495@noblis.webex.com), you can also dial 173.243.2.68 and enter the meeting number.

  Join by Phone
  - 1 (844) 740-1264 (Toll Free), 1 (415) 655-0003 (Toll)
  - Access Code: 734 968 495
Office of Naval Research Releases FY 2020 Funding Opportunity Announcement for Young Investigator Program

On June 21, the Office of Naval Research (ONR) released its fiscal year (FY) 2020 funding opportunity announcement (FOA) for the Young Investigator Program (YIP). This popular program, which is also offered by other Department of Defense (DOD) agencies such as the Army Research Office (ARO) and the Air Force Office of Scientific Research (AFOSR), provides early career university faculty a path into the Navy's research enterprise through multi-year research grants. With this program, ONR identifies promising young tenure-track faculty who demonstrate the ability to deliver innovative research aligned with ONR’s research priorities.

DOD will accept any proposals that address research areas outlined in ONR’s broad research portfolio that are of interest to ONR program managers. A complete list of topics of interest to each of ONR’s five departments – Information, Cyber and Spectrum Superiority (Code 31); Ocean Battlespace and Expeditionary Access (Code 32); Mission Capable, Persistent and Survivable Naval Platforms (Code 33); Warfighter Performance (Code 34); and Aviation, Force Projection and Integrated Defense (Code 35) – is available on ONR’s science and technology homepage located at http://www.onr.navy.mil/Science-Technology/Departments.aspx.

ONR has offered the following best practices to increase the success of YIP candidates:

- Contact the ONR program manager before submitting a proposal.
- Try to understand the program officer’s portfolio and interests.
- Review the ONR website; become familiar with Navy terminology/where your technology fits in.
- Demonstrate merit with a record of publishing in peer reviewed journals and a strong letter of support from the university and/or department.
- Submit a complete curriculum vitae with the white paper and/or proposal package.

Due Date: Proposals should be submitted through www.grants.gov no later than August 16, 2019 at 11:59 EST. Applicants are strongly encouraged to contact the Program Manager in their technical area to discuss their research ideas before submitting a proposal. Proposers may also send brief, informal pre-proposals to their designated ONR program officer and copy ONRYIP@navy.mil.

Total Funding and Award Size: Individual awards will be funded at a maximum of $510,000 for a three-year base period, with a possibility for an additional $250,000 during the base period as supplemental funding for equipment, testing and other similar expenses. ONR anticipates making multiple awards but does not specify the number of awards or overall funding for this competition.

Sources and Additional Information:

- The full solicitation can be found at www.grants.gov under solicitation number “N00014-19-S-F010.”
- DOD’s overview of the VBFF program can be found at https://basicresearch.defense.gov/Programs/Vannevar-Bush-Faculty-Fellowship/.
Eligibility and Limitations: This BAA is open to first or second full-time tenure-track faculty who have received their degree on or after January 1, 2012. Faculty from institutions of higher education that award degrees in science, engineering, and/or mathematics are eligible to apply. U.S. nonprofit organizations operating for scientific and educational services may also submit proposals. Note that ONR makes awards to institutions, not individuals. Researchers therefore must submit proposals along with a letter of support from the university through appropriate administrators. Additional eligibility and submission instructions can be found in the full FOA.

Sources and Additional Information:
- Information on ONR’s research focus areas can be found at http://www.onr.navy.mil/Science-Technology/Departments.aspx.
- A list of ONR Program Managers is available at https://www.onr.navy.mil/our-research/our-program-managers.

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Institute of Education Sciences Education Research Grant Competitions Announced

The U.S. Department of Education’s (ED) Institute of Education Sciences (IES) has announced its fiscal year (FY) 2020 competitions for education research and special education research. The new funding notice explains that these awards will “provide national leadership in expanding knowledge and understanding of (1) developmental and school readiness outcomes for infants and toddlers with or at risk for a disability, (2) education outcomes for all learners from early childhood education through postsecondary and adult education, and (3) employment and wage outcomes when relevant (such as for those engaged in career and technical, postsecondary, or adult education).”

IES plans to host eight competitions in FY 2020 that address a range of relevant topic areas, including research related to education technology and STEM education, two topics of high interest to policymakers and agency officials. Career and Technical Education, which aligns with the Trump Administration’s priorities, remains a topic area of focus. While much of the funding call mimics last year’s topics and priorities, the FY 2020 notice introduces two new competitions focused on exploring systematic replication of findings in education and special education research.

The awards will be administered through the Institute’s major grant-awarding centers, the National Center for Education Research (NCER) and the National Center for Special Education Research (NCSER). Details on each of the centers’ priorities are outlined below.

NCER will administer five competitions for grants pertaining to specific topic areas. Competitions and topics are listed below:
- Education Research –The education research competition invites applications that address one of the following topics:
  - Career and Technical Education
  - Cognition and Student Learning
  - Early Learning Programs and Policies
• Research Training Programs in the Education Sciences – Applications for this competition must address one of three topics: Predoctoral Interdisciplinary Research Training Program in the Education Sciences, Postdoctoral Research Training Program in the Education Sciences, or Methods Training for Education Researchers.

• Education Research and Development Centers – Applications for this competition must address one of two topics: Improving Opportunities and Achievement for English Learners in Secondary School Settings, Improving Teaching and Learning in Postsecondary Institutions, or Improving Access, Instruction, and Outcomes in Gifted Education.

• Statistical and Research Methodology in Education – Applications for this competition must address one of two topics: Statistical and Research Methodology Grants or Early Career Statistical and Research Methodology Grants.

• Research Grants Focused on Systematic Replication – Applications for this competition must address identifying what works in education through systematic replication. Specific interventions identified for replication are available at https://ies.ed.gov/director/remarks/4-15-2019.asp.

NCSER will administer three competitions in the following research areas of interest:

• Special Education Research – The special education research program will consider proposals that address one of the following topic areas:
  o Autism Spectrum Disorders.
  o Cognition and Student Learning in Special Education.
  o Early Intervention and Early Learning in Special Education.
  o Families of Children with Disabilities.
  o Professional Development for Educators and School-Based Service Providers.
  o Reading, Writing, and Language Development.
  o Science, Technology, Engineering, and Mathematics (STEM) Education.
  o Social and Behavioral Outcomes to Support Learning.
  o Special Education Policy, Finance, and Systems.
  o Technology for Special Education.
  o Transition Outcomes for Secondary Students with Disabilities.
  o Special Topics, which include—
    ▪ Career and Technical Education for Students with Disabilities.
    ▪ English Learners with Disabilities.
    ▪ Systems-Involved Students with Disabilities.

• Research Training in Special Education – Applications must address one of three topics: Postdoctoral Research Training Program in Special Education and Early Intervention, Early Career Development and Mentoring, or Methods Training Using Single Case Designs.

Application Deadlines:

- For *Education Research (84.305A)*, *Research Training Programs in the Education Sciences (84.305B)*, *Statistical and Research Methodology in Education (84.305D)*, *Research Grants Focused on Systematic Replication (84.305R)*, *Special Education Research (84.324A)*, *Research Training Programs in Special Education (84.324B)*, and *Research Grants Focused on SystematicReplication (84.324R)*: Applications become available July 11, 2019; completed applications due by August 29, 2019.

- For *Education Research and Development Centers (84.305C)*: Applications become available July 11, 2019; completed applications due by September 26, 2019.

**Total Funding and Award Size:** Project period estimations range from three to five years, depending on the program, and approximate award sizes range from $40,000 to $2,000,000 annually. Actual number of awards and funding levels are dependent on FY 2020 funding, which has not yet been finalized by Congress. The House of Representatives recently passed a spending bill that would fund IES at $650 million for FY 2020, an increase of 5.6 percent over FY 2019 levels. The Senate has yet to introduce its proposal for ED funding.

**Eligibility:** Eligible applicants include nonprofit and for-profit organizations, public and private agencies, and institutions of higher education.

**Sources and Additional Information:**


**National Institutes of Health Future Funding Opportunity for Specialized Centers of Excellence on Environmental Health Disparities Research**

The National Institute on Minority Health and Health Disparities (NIMHD) and the National Institute of Environmental Health Sciences (NIEHS) released a notice of intent to publish a funding opportunity for Centers of Excellence on Environmental Health Disparities Research. This grant program is designed to support multidisciplinary research, increase research capacity, and invest in community-engaged research activities aimed at reducing or eliminating environmental health disparities. Proposals should integrate social and environmental determinants of health to investigate known conditions with environmental components which also disproportionately affect minority groups.

Projects must have a focus on one or more National Institutes of Health (NIH)-designated health disparity population (Blacks or African Americans, American Indians or Alaska Natives, Asians, Hispanics or Latinos, Native Hawaiians and other Pacific Islanders, socioeconomically disadvantaged populations, underserved rural populations, and sexual and gender minorities) and should involve the work of minority researchers.

**Publication:** The complete funding opportunity is anticipated to be released on **August 1, 2019**.

Tufts Washington Update
Prepared by Lewis-Burke Associates LLC
June 25, 2019
Deadline: The first anticipated application due date is November 15, 2019.

Award Information: Neither the expected number of awards nor the total funding estimate are available at this time. Lewis-Burke will provide additional details when the full funding opportunity is published.

Eligibility: Any public or private institution of higher education that has a significant number of students from NIH-designated minority health disparity populations or has made significant efforts to recruit such students may apply for this award.

Sources and Additional Information:


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Between July and October 2019, the Department of Energy (DOE) Office of Advanced Scientific Computing Research (ASCR) intends to host four “townhall” meetings that will help identify future research directions at the intersection of AI and science. These efforts are being undertaken as DOE ramps down its Exascale Computing Initiative (ECI) and looks toward long-term visioning for ASCR’s research agenda. ASCR expects to use the findings of these townhalls to generate a report that will guide AI and HPC research investments in the post-ECI period. For context, ASCR conducted a similar series of townhalls in 2007 when DOE was forming the contours of what would later become ECI.

The locations and dates of the townhalls, each of which will be held in a different time zone to simplify travel, are as follows:

1. Argonne National Laboratory, July 22-23
2. Denver Area, August 20-21
3. Lawrence Berkeley National Laboratory, September 11-12
4. DC Area, October 22-23

ASCR intends the discussion topics and formats to be fairly uniform across the four townhalls, though there may be some variation. For example, the Denver area townhall might feature more discussion on AI applications related to solar and wind energy because of the likely attendance of researchers from the nearby National Renewable Energy Laboratory. Meanwhile, the convergence of AI and fundamental science may be more of a focus during the Argonne- and/or Berkeley-based meetings since those labs specialize more in fundamental research. Each townhall will also include breakout sessions centered around specific topics such as mathematical research, microelectronics, data life cycle, system architectures, and facilities integration.
Sources and Additional Information:

- Additional information on HPC research areas that DOE may support in the future can be found in a recently released report from the Advanced Scientific Computing Advisory Committee: [https://science.osti.gov/-/media/ascr/ascac/pdf/meetings/201903/Future_High_Performance_Computing_Capabilities_ASCAC_20903.pdf?la=en&hash=629548777233D4B8043E0C07706DA519101367E3](https://science.osti.gov/-/media/ascr/ascac/pdf/meetings/201903/Future_High_Performance_Computing_Capabilities_ASCAC_20903.pdf?la=en&hash=629548777233D4B8043E0C07706DA519101367E3).

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**Department of Transportation Releases FY 2019 Advanced Transportation and Congestion Management Technologies Deployment Competition**

The U.S. Department of Transportation’s (DOT) Federal Highway Administration (FHWA) recently announced the competition for its Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) grant program. The ATCMTD program was established in the 2015 *Fixing America’s Surface Transportation Act (FAST Act)* to promote testing and deployment of technologies that reduce congestion and improve safety. Competed annually and in its fourth competition, the ATCMTD program provides $60 million each year to establish five to ten awards at a maximum of $12 million each. While universities and research organizations are eligible to lead a consortium, their success rate is low. In the three prior competitions, the only successful academic institution leading a consortium was the University of Alabama in the FY 2018 competition. FHWA has also emphasized that it will not consider any application submitted by a sole academic or research institution that is not leading a consortium.

FHWA is interested in funding projects that support the following specific deployment programs and projects:

- “Multimodal Integrated Corridor Management (ICM)
- Installation of connected vehicle technologies at intersections, pedestrian crossing locations, and other conflict areas
- Unified fare collection and payment systems across transportation modes and jurisdictions
- Freight Community System
- Technologies to support connected communities
- Infrastructure Maintenance, Monitoring, and Condition Assessment
- Rural technology deployments.”

Lewis-Burke strongly recommends interested universities and research institutions leverage existing – or use the announcement to establish – relationships with state and local governments and Metropolitan Planning Organizations (MPO) in pursuit of this opportunity. Additionally, interested applicants should email ATCMTD@dot.gov prior to the NOFO due date with the applicant’s name, the state where the project would take place, estimated total project cost and the amount from the ATCMTD grant, and a brief paragraph describing the proposal. DOT will host a webinar for interested participants at 1:00 PM Eastern on June 27.

**Application Deadline:** Applications are due no later than July 19, 2019.

**Total Funding and Award Size:** DOT anticipates making between 5 and 10 awards between $5 million and $12 million. Recipients can expend funds beyond the original one-year term of the award, however,
FHWA must obligate the total award amount by the third fiscal year after an award has been made. The total federal share of a proposal may not exceed 50 percent.

**Funding Restrictions:** Lead applicants are limited to three submissions.

**Applicant Eligibility:** Eligible applicants include state, local, or tribal governments and their various political subdivisions, including Metropolitan Planning Organizations, transit agencies, port authorities, and/or multijurisdictional group or consortia of research institutions or academic institutions.

**Sources and Additional Information:**

- More information can be found on [www.grants.gov](http://www.grants.gov) under opportunity number “693J319NF00003”.
- A list of FY 2018 recipients can be found at [https://www.fhwa.dot.gov/pressroom/fhwa1906.cfm](https://www.fhwa.dot.gov/pressroom/fhwa1906.cfm).
- Registration for the webinar can be found at [https://connectdotcqpub1.connectsolutions.com/content/connect/c1/7/en/events/event/private/1116037741/1228647779/event_registration.html?co-id=1228657667](https://connectdotcqpub1.connectsolutions.com/content/connect/c1/7/en/events/event/private/1116037741/1228647779/event_registration.html?co-id=1228657667).