October 7, 2019

The Honorable Richard Shelby
Chairman
Subcommittee on Defense
Committee on Appropriations
United States Senate
Washington, DC 20510

The Honorable Richard Durbin
Ranking Member
Subcommittee on Defense
Committee on Appropriations
United States Senate
Washington, DC 20510

The Honorable Pete Visclosky
Chairman
Subcommittee on Defense
Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

The Honorable Ken Calvert
Ranking Member
Subcommittee on Defense
Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

Dear Chairmen Shelby and Visclosky, and Ranking Members Durbin and Calvert,

On behalf of the Coalition for National Security Research (CNSR), a 100-member-plus coalition of industry, academia, scientific and professional associations, and non-profits, I write to thank you for your support for the Defense Science and Technology (S&T) program in the Senate and House FY 2020 Defense Appropriations bills. We commend you for rejecting the cuts proposed in the President’s budget request and greatly appreciate the increases for Defense basic research funding in both bills. The Coalition urges you to move expeditiously to complete the FY 2020 Defense Appropriations process to limit impacts to vital defense research programs, and I offer the following recommendations for the final FY 2020 Defense Appropriations bill.

**Overall Defense S&T Program Funding**

Investing in the Defense S&T program is essential to meeting the objectives of the National Defense Strategy (NDS), including deterring adversaries, sustaining Joint Force military advantages, and establishing an unmatched twenty-first century national security innovation base. The core functions of the Defense S&T program are to advance and develop the capabilities needed to ensure technological superiority over our adversaries.

While Research, Development, Test, and Evaluation (RDT&E) overall is significantly increased, we are concerned that both the Senate and House bills fund Defense S&T below FY 2019 enacted levels. Recognizing the limited resources given the many security challenges facing the nation, **we urge you to support at least the Senate level of $15.6 billion for Defense S&T funding in the final FY 2020 Defense Appropriations bill.**
Defense Basic Research Funding

The NDS states that “we cannot expect success fighting tomorrow’s conflicts with yesterday’s weapons or equipment.” One of the goals of defense basic research is to support the scientific discoveries that will ultimately lead to the development of the new transformational capabilities for the military to have success in defending the United States. Colleges, universities, and non-profits perform 58 percent of U.S. Department of Defense (DOD)-sponsored basic research, so it is absolutely vital to invest in the programs that support research at academic and non-profit institutions to enable the creation of future military capabilities to ensure technical dominance over adversaries such as China and Russia.

We respectfully request that you maintain both the increases for the Defense Research Sciences (DRS) program elements (PEs) in the Senate bill and the increases for University Research Initiatives (URIs) in the House bill in the final bill. The DRS PEs in each of the Services fund basic research that expands our knowledge and understanding of the physical, engineering, environmental, and life sciences. DRS-sponsored basic research often can be the first step before transitioning to applied research and eventually a future military capability.

URIs regularly sponsor university basic research that produces revolutionary new military technologies. Numerous advances in quantum information sciences, unmanned aircraft (UAS), nanotechnology, biological detection capabilities, and stealth detection sensors all stem from URI-sponsored scientific research. We are concerned with URI funding levels in the Senate bill and strongly urge the adoption of no less than the House funding levels. The Senate bill would ultimately result in a nearly $30 million cut to URIs. The core URI programs, the Multidisciplinary University Research Initiative (MURI) and Defense University Research Instrumentation Program (DURIP), already do not have the resources to meet demands. In FY 2019, only 24 of 295 MURI proposals were funded and only $56 million in DURIPs were awarded out of $259 million requested. The DURIP awards fund the procurement or development of scientific instrumentation to support the execution of basic research and expand the capacity of the research enterprise. Cuts to URIs would further exacerbate the situation and undermine critical research in DOD priority areas such as quantum materials, biologically-enhanced sensing and computing, autonomous reasoning, and adaptive materials.

Finally, we urge you to support robust funding for several important Defense-Wide Basic Research PEs. Specifically, we respectfully request the following for these four programs:

- **DTRA Basic Research Initiatives**: reverse the 29.8% cut in both House & Senate bills, restoring this account to FY 2019 level
- **Minerva**: ensure full funding despite Army withdrawing support
- **Basic Research Initiatives**: support Senate level
- **National Defense Education Program (NDEP)**: support House level

Each of these PEs supports scientific research and education consistent with the NDS. Funding for these PEs often addresses specific concerns such as reducing threats from weapons of mass destruction or seeks to solve workforce challenges unique to DOD including the submarine workforce. With adversaries such as China investing heavily in research and talent recruitment
programs, now more than ever we need to increase our investments in scientific research and education efforts that will support a twenty-first century national security innovation base with a state-of-the-art ready workforce.

**Applied Research Funding**

CNSR largely supports the Senate bill for applied research funding levels. We commend the Senate bill for the increases in the *Defense-Wide Manufacturing Science and Technology Program* PE, which provides resources for DOD’s contribution to the Manufacturing USA Network and the Manufacturing Engineering Education Program (MEEP). The Manufacturing USA Network is moving discoveries from the nation’s universities and research laboratories to the defense industrial base while enhancing the workforce. In FY 2018, over 475 major applied research and development projects were undertaken and more than 200,000 individuals participated in Manufacturing USA-led workforce development opportunities. MEEP recently awarded its first set of projects; however, only four grants were awarded due to funding limitations. The potential for this program is not being fully capitalized.

**Defense Advanced Research Projects Agency (DARPA)**

DARPA’s ability to create truly revolutionary new capabilities is well documented. The Internet, self-driving cars, speech technologies, neuro-prosthetics, and stealth technologies all started as DARPA projects, often performed by industry, academia or non-profits, as nearly 90 percent of DARPA funding is extramural research. *CNSR supports the House funding level of $3.5 billion for DARPA* to spearhead scientific research in areas such as artificial intelligence, hypersonics, detecting radiological threats, microelectronics, and long-range anti-ship capabilities.

Thank you for your commitment to a robust Defense S&T program. Please do not hesitate to contact me if CNSR can be of any service to you.

Sincerely,

John Latini  
Chairman  
Coalition for National Security Research (CNSR)