

# Congress of the United States

Washington, DC 20510

April 28, 2022

The Honorable Betty McCollum  
Chairwoman  
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 Chairwoman McCollum and Ranking Member Calvert,

We write to respectfully request that the fiscal year (FY) 2023 Department of Defense Appropriations bill provide robust funding levels for the following U.S. Department of Defense (DoD) basic research program elements (PEs).

<b>PE Number</b>	<b>Agency/RDT&amp;E</b>	<b>Program Element (PE)</b>	<b>FY 22 Enacted</b> <i>(\$ in thousands)</i>
0601102A	Army	Defense Research Sciences	\$370,241
0601103A	Army	University Research Initiatives	\$91,981
0601103N	Navy	University Research Initiatives	\$174,898
0601153N	Navy	Defense Research Sciences	\$523,421
0601102F	Air Force	Defense Research Sciences	\$353,303
0601103F	Air Force	University Research Initiatives	\$187,403
0601000BR	Defense-Wide	DTRA Basic Research Initiatives	\$11,828
0601110D8Z	Defense-Wide	Basic Research Initiatives	\$76,828
0603680D8Z	Defense-Wide	Defense-Wide Manufacturing S&T Program	\$255,667

\*Dollars in thousands

As we continue our focus on great power competition, it is critical for the U.S. to maintain its global military and technological superiority. DoD's basic research initiatives enable discoveries in emerging technologies that provide transformational military capabilities necessary to maintain our edge over competitor nations such as China and Russia, particularly considering Vladimir Putin's recent, unprovoked invasion of the sovereign nation of Ukraine. Advances in hypersonics testing, semiconductors that power defense radar systems, solar cell efficiency, laser technologies, stealth capabilities, night vision, GPS, sonar, radar, precision munitions, biosensors, computer networking and security, and near-real-time delivery of battlefield information all stem from DoD-sponsored basic research. Not only are many of these technological advances critical to U.S. national security, but they have also led to new industries and driven significant advances in economic opportunities for the country.

DoD-sponsored basic research also attracts the best and brightest minds to work on complex challenges facing the military<sup>1</sup>. Further, funding basic research creates training and research opportunities for students who will become the next generation workforce for the defense industrial base<sup>2</sup>. Finally, DoD-sponsored basic research's ability to create game-changing technologies is vital to meeting the objectives of the newly released 2022 *National Defense Strategy (NDS)*, including deterring aggression, building a resilient Joint force, and establishing a national security innovation base to sustain and support DoD operations.

Despite the importance of DoD's basic research PEs, several key programs remain under-resourced. These include the Multidisciplinary University Research Initiative (MURI) programs, funded under each Services' University Research Initiatives (URIs) PE, which regularly sponsor university basic research that produces revolutionary advances in domestic semiconductor manufacturing capabilities, quantum computing and communication, cybersecurity, military drones, nanotechnology, biological detection capabilities, force protection for tactical vehicles, and sensors to enable navigation systems in GPS compromised environments, among many others<sup>3</sup>. Unfortunately, according to DoD, the MURI program received 340 proposals in FY 2022, but was only able to make 28 awards, leaving 312 potentially game-changing proposals unfunded.

Each Services' URI's Defense University Research Instrumentation Program (DURIP), which provides funding for essential research infrastructure and equipment, also remain under-resourced. Given that colleges and universities perform about 54 percent of DoD-sponsored basic research<sup>4</sup> - and are thus the primary entities conducting the research to generate new technological capabilities for the military - it is imperative that academic institutions have the unique equipment needed to conduct cutting edge basic research of importance to DoD. Historically, the Department has been unable to fund the majority of the proposals submitted. In FY 2022, DURIP received 685 proposals, requesting \$456 million in total funding. However, the initiative was only able to award 144 projects at \$46 million in total funding, leaving 541 proposals unfunded.

We also support the Defense-wide Basic Research Initiatives (BRI) program element, which includes funding for the Minerva Research Initiative. Minerva is DoD's signature social science basic research program that funds university-led teams to address problems of strategic importance to U.S. national security. Minerva projects have given DoD unique insights that help shape future national security policies and better position the warfighter in a complex global environment. The FY 2021 budget request proposed to eliminate Minerva, but the House

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<sup>1</sup> <https://dsb.cto.mil/reports/2010s/BasicResearch.pdf>

<sup>2</sup> Ibid

<sup>3</sup> <https://www.ida.org/research-and-publications/publications/all/d/de/defense-governance-management-improving-the-defense-management-capabilities-of-foreign-defense-institutions-using-a-relational-database-focus-to-improve-defense-force-planning-and-budgeting-an-over>.

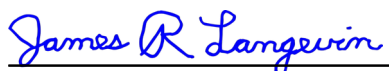
<sup>4</sup> <https://ncesdata.nsf.gov/fedfunds/2018/html/ffs18-dt-tab009.html>

Defense Appropriations subcommittee led the successful effort to restore funding. In FY 2022, we were thrilled to see Minerva projects receive a programmatic increase of \$10 million and are hopeful to continue to have your support in FY 2023.

Finally, we note the importance of the Defense Research Services (DRS), Defense Threat Reduction Agency (DTRA) Basic Research Initiatives, and Defense-Wide Manufacturing S&T PEs. Each Services' DRS funds a wide variety of basic research, including physical, engineering, and environmental, that is often the first step before transitioning to applied research and a future military capability. DTRA Basic Research Initiatives funds university alliances to develop systems that would be able to withstand radiation among other activities vital to countering and deterring weapons of mass destruction. The Defense-Wide Manufacturing S&T program sponsored 500 major research projects that benefited thousands of manufacturing firms in FY 2020<sup>5</sup>, and approximately 72% of the firms are small manufacturing companies that are key to manufacturing supply chains<sup>6</sup>. Each of these initiatives, along with others mentioned in this letter, are tremendously important parts of the defense innovation ecosystem that will enable the American military to surpass competitor nations, with a particular eye towards China's rise in the Indo-Pacific, and Russia's unprovoked aggression in Europe.

Thank you in advance for your consideration. We look forward to working with you to ensure DoD has the appropriate resources to generate the new game-changing technologies and capabilities to sustain the United States' global technological superiority.

Sincerely,



James R. Langevin  
Member of Congress



Michael Waltz  
Member of Congress



Kathleen M. Rice  
Member of Congress



Steve Cohen  
Member of Congress

<sup>5</sup> <https://www.nist.gov/publications/manufacturing-usa-highlights-report>

<sup>6</sup> Ibid



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Scott H. Peters  
Member of Congress



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Brian Fitzpatrick  
Member of Congress



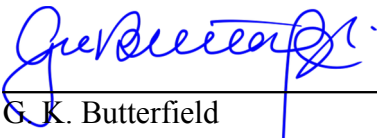
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SETH MOULTON  
Member of Congress



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Rick Larsen  
Member of Congress



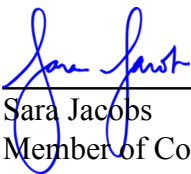
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G. K. Butterfield  
Member of Congress



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Glenn "GT" Thompson  
Member of Congress



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Sara Jacobs  
Member of Congress



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Chris Pappas  
Member of Congress



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Joseph D. Morelle  
Member of Congress



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Jason Crow  
Member of Congress



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A. Donald McEachin  
Member of Congress



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Mike Levin  
Member of Congress



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Anthony G. Brown  
Member of Congress



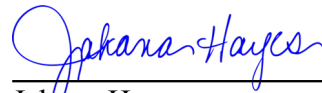
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Andy Kim  
Member of Congress



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Ro Khanna  
Member of Congress



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Jahana Hayes  
Member of Congress



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Stephen F. Lynch  
Member of Congress



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David Scott  
Member of Congress



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Al Green  
Member of Congress



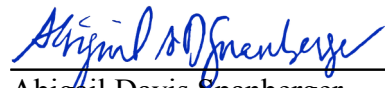
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Danny K. Davis  
Member of Congress



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Mike Doyle  
Member of Congress



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Abigail Davis Spanberger  
Member of Congress



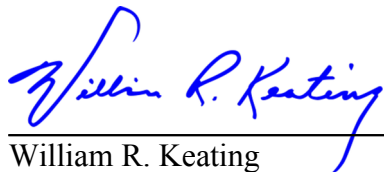
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David N. Cicilline  
Member of Congress



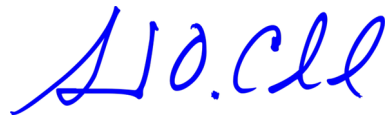
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MARK TAKANO  
Member of Congress



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William R. Keating  
Member of Congress



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Salud Carbajal  
Member of Congress



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Ted W. Lieu  
Member of Congress



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Gregory F. Murphy, M.D.  
Member of Congress



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Scott DesJarlais, M.D.  
Member of Congress



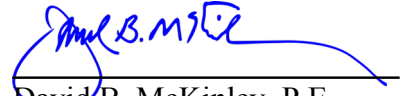
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Deborah K. Ross  
Member of Congress



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C. Scott Franklin  
Member of Congress



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David B. McKinley, P.E.  
Member of Congress