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).

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

* 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\(^1\). Further, funding basic research creates training and research opportunities for students who will become the next generation workforce for the defense industrial base\(^2\). 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\(^3\). 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\(^4\) - 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

\(^1\) https://dsb.cto.mil/reports/2010s/BasicResearch.pdf  
\(^2\) Ibid  
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 2020⁵, and approximately 72% of the firms are small manufacturing companies that are key to manufacturing supply chains⁶. 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,

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James R. Langevin
Member of Congress

Michael Waltz
Member of Congress

Kathleen M. Rice
Member of Congress

Steve Cohen
Member of Congress

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⁶ Ibid
Mike Doyle
Member of Congress

Abigail Davis Spanberger
Member of Congress

David N. Cicilline
Member of Congress

MARK TAKANO
Member of Congress

William R. Keating
Member of Congress

Salud Carbajal
Member of Congress

Ted W. Lieu
Member of Congress

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

Scott DesJarlais, M.D.
Member of Congress

Deborah K. Ross
Member of Congress
C. Scott Franklin
Member of Congress

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