Coalition for National Security Research

March 27, 2017

The Honorable James Mattis Secretary of Defense U.S. Department of Defense 1400 Defense Pentagon Washington, DC 20301

Dear Mr. Secretary,

As you develop the FY 2018 U.S. Department of Defense (DOD) budget request that will include additional funding above the budget caps, the Coalition for National Security Research (CNSR), representing the undersigned research universities and institutes, scientific and professional associations, and businesses, respectfully requests that you seek to support robust and sustained growth in the DOD's basic research and Science and Technology (S&T) program budgets. We also urge you to use the funding appropriated in H.R. 1301, the Department of Defense Appropriations Act, 2017 as the basis for developing the FY 2018 DOD budget request.

As you can appreciate from your time in uniform, the defense basic research programs enable discoveries that have led to paradigm shifts in the military's technical capabilities. Our national security strategy calls for dominance over our adversaries. Basic research is many times the only way to solve complex problems that lead to transformational technologies and capabilities that have made the U.S. military the best fighting force on the planet. With countries like China more than tripling their spending on research and development over the past 17 years, now more than ever we need to support basic scientific research to enable discoveries and innovations that will provide the necessary military capabilities of tomorrow and help offset any technological innovations made by competitor nations. It is vital to our national security that the United States maintains its technical superiority; investing in defense basic research now will ensure our national security well into the future.

Making significant breakthroughs in fundamental research requires stable and long-term funding. While we agree that the U.S. must make investments to address near-term threats, we cannot underinvest in the basic research that enables discoveries that are the foundation of the innovation pipeline. To that end, we would like to draw your attention to the document: *Innovation: An American Imperative* (Innovation Imperative) - a statement signed by the CEOs of Northrop Grumman, Lockheed Martin, Boeing, Microsoft, and endorsed by over 500 other leading organizations from industry, higher education, and science and engineering. The Innovation Imperative urges Congress to end sequestration and provide steady and sustained growth in funding of **at least four percent** for basic scientific research at numerous agencies, including DOD. As a cosigner of the Innovation Imperative, CNSR believes that if the U.S. is to maintain its technological superiority, we must prioritize federal scientific research investments and support policies that promote innovation. We urge you to include at least a four percent increase above levels in H.R. 1301 for the defense basic research programs in the FY 2018 DOD budget request.

In addition, we remain concerned about the overall DOD S&T program. The 2001 Quadrennial Defense Review Report, Council on Competitiveness and National Academy of Sciences all have called for DOD S&T program budget to comprise at least 3% of the total budget. While we understand the

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National Security Research

Department has faced severe cuts over the past few years, the FY 2017 DOD S&T program budget request is approximately 1% or roughly \$5 billion below the recommended levels. The result is an S&T program that is not growing at levels necessary to advance military technologies our Warfighters need to continue to be the most effective fighting force in the world. With basic research serving as the first step in creating new military capabilities, the S&T program applies the knowledge gained from basic research to solve military problems and develop the systems and components to potential solutions are essential to fielding the military technologies of tomorrow. The private sector has no incentive to fund the majority of this type of research so federal funding is vital to advancing technologies beyond basic research. We urge you to include robust funding for the DOD S&T program in the FY 2018 DOD budget request.

Thank you for your consideration of our views. If we can be of any assistance as you develop the FY 2018 DOD budget request, please do not hesitate to contact us.

Sincerely,

CNSR Members

American Chemical Society

American Institute for Medical and Biological Engineering

American Mathematical Society
American Psychological Association
American Society for Engineering Education
American Society of Mechanical Engineers

Arizona State University

Association of American Universities

Association of Public and Land-grant Universities

Battelle Boston University Brown University

California Institute of Technology Carnegie Mellon University Columbia University

Computing Research Association Consortium for Ocean Leadership

Cornell University Duke University Energetics, Inc.

Federation of Materials Societies Florida International University Florida State University George Mason University Georgia Institute of Technology

Harvard University

Indiana University

Institute of Electrical and Electronics Engineers - USA

Lehigh University Louisiana State University Louisiana Tech University

Massachusetts Institute of Technology

Materials Research Society Michigan State University Michigan Technological University New Mexico State University Northern Illinois University Northwestern University Oak Ridge Associated Universities

Ohio State University

Oregon Health and Sciences University

Oregon State University Pace University Penn State University Princeton University Purdue University

Rensselaer Polytechnic Institute

Rutgers, The State University of New Jersey Semiconductor Industry Association

Society for Industrial and Applied Mathematics

SRI International Texas A&M University The Johns Hopkins University The Optical Society

The State University of New York

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University of California – San Diego
University of California System
University of Central Florida
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University of Michigan University of Missouri System University of Nebraska

University of North Carolina – Chapel Hill University of North Carolina System

University of Pennsylvania University of Pennsylvania University of Pittsburgh University of Rochester University of South Florida University of Southern California

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Vanderbilt University
Washington State University
West Virginia University

Woods Hole Oceanographic Institution

Yale University

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