

October 29, 2021

Ms. Shalanda D. Young Dr. Eric S. Lander

Acting Director Director

Office of Management and Budget Office of Science and Technology Policy

Dear Ms. Young and Dr. Lander,

The Coalition for National Science Funding (CNSF) appreciates the opportunity to submit policy recommendations in response to the Biden Administration’s FY 2023 multi-agency R&D priorities to the Office of Management and Budget (OMB) and the Office of Science and Technology Policy (OSTP).

CNSF is an alliance of more than 130 professional organizations, scientific societies, universities, and businesses united in our advocacy for the National Science Foundation (NSF). CNSF supports the goal of increasing the national investment in NSF’s research and educational programs in response to the scientific, technological, and economic challenges facing the United States. NSF plays a critical role in advancing our nation’s competitiveness and addressing research and education challenges related to many Biden Administration priorities. We hope that you will use the FY 2023 budget request to propose growth to NSF that enables progress on these priorities, as well as steady expansion to the agency’s core activities that form the backbone of the U.S. science and technology innovation ecosystem.

***Pandemic readiness and prevention***

The COVID-19 pandemic has touched every sector of the economy and required research across disciplines, in order to tackle the numerous societal, medical, public health, forecasting, logistics, education, and manufacturing challenges facing our nation. NSF funding has helped address many of these challenges, including the development of early warning systems, diagnostics, tools for virtual learning, and public health innovations. In addition, NSF has addressed the challenges facing the academic and research communities that have been disrupted through the pandemic, ensuring support for the next generation of scientists and engineers. Now is the time to set a trajectory that will put the nation back on a path that ensures not only economic recovery from the pandemic, but also builds a capable workforce, and develops the science and technologies necessary to best prepare our nation for future

pandemics and other natural disasters.NSF is leading the way through programs such as

Predictive Intelligence for Pandemic Prevention. ***NSF’s continued funding for pandemic preparedness will ensure that we continue to bring engineering, social, behavioral, ecological, computing, and other non-medical approaches to this enormous challenge. NSF should also continue to rebuild the research enterprise for recovery from pandemic-related losses, especially focusing on those at most risk in the scientific community and our next generation of scientists.***

***Tackling climate change and spurring energy innovation***

Climate change is one of the most challenging and complex issues facing our nation and the world, requiring deep understanding of complex and interdependent biological, geological, social, and behavioral systems, and needing urgent technological innovation to enhance our resilience. NSF has been instrumental across these fields, advancing our foundational understanding of climate change, challenges facing specific regions and communities such as the Arctic and coasts, training the climate and energy workforce of the future, and developing innovations in environmental engineering, energy, and resilience. There is enormous opportunity for NSF to grow its convergent research, innovation and partnership activities to address climate change. ***The Administration should ensure that NSF plays a key role in national climate and energy initiatives. Additional funding for NSF is necessary to truly meet the challenge ahead while at the same time ensuring that we do not jeopardize the foundational science and engineering ecosystem that will be critical for our future competitiveness and resilience.***

***Catalyze research and innovation in critical and emerging technologies***

Funding for research and innovation in several areas, including artificial intelligence, quantum information science and high-performance computing, among others, is critical for maintaining our nation’s global competitiveness. NSF support is essential for expanding these technologies, for training a diverse workforce of future innovators, and for developing new research ideas. Fundamental research supported by the NSF often lays the groundwork for developing new technologies. ***CNSF encourages the Administration to support NSF-funded technological innovations that ensure our nation’s global competitiveness, in addition to fundamental research which drives our nation forward in science and technology.***

***STEM education, engagement, and innovation for equity***

Equity and access to federal funding opportunities and programs are critical for our nation’s prosperity and can only be achieved through increasing capacity building and expanding participation in training programs. NSF supports implementing programs to promote excellence in STEM education at all levels and in all settings, as well as research aimed at developing and

identifying successful education and training models. These investments, in turn, help STEM educators reach the “missing millions” and support a diverse and well-prepared workforce. Talent development for those underserved and underrepresented in STEM through equitable education and training can greatly strengthen our nation’s workforce. ***CNSF encourages the Administration to invest in NSF-funded workforce, education, and education research activities, in order to ensure the development of a diverse and inclusive STEM workforce.***

***National security and economic resilience***

Investments in research and technology underpin our resilience and national security. NSF partners with the Department of Defense in many areas to ensure that foundational advances in science and engineering address national security challenges, and to establish and maintain the development of a diverse future workforce that will underpin our economic competitiveness and national security enterprise. For example, NSF funds efforts to understand social and behavioral systems that improve decision making, training and collaboration. NSF also supports research that enhances cybersecurity and protects against online-threats that have been exacerbated during the pandemic. Research collaborations with international partners help maintain an open and engaging research environment and drive progress in science and technology. ***CNSF encourages the Administration to support research and technological innovations, including social and behavioral research, in order to ensure our national security while maintaining a collaborative global research environment.***

We look forward to working with you to support NSF funding in FY 2023. If CNSF can be a resource for you in this endeavor, please don’t hesitate to contact us.

Sincerely,

The Coalition for National Science Funding

List of CNSF members