February 3, 2014

Dear Chairman Smith:

Thank you for the opportunity to comment on the discussion draft of the Frontiers in Innovation, Research, Science, and Technology Act of 2013 (FIRST Act). We take the public trust that is placed on the scientific community very seriously and share your desire to ensure that public funds are invested wisely so that research can improve our quality of life. However, we fear that several provisions in your discussion draft could have unintended consequences that would hinder academic independence and public confidence in the U.S. scientific enterprise thus undermining our ability to remain the world’s leader in innovation. The National Science Foundation’s (NSF) continued support of social and behavioral sciences is integral to the nation’s overall scientific and research enterprise, which helps translate the benefits of all scientific investments to human well-being. We appreciate your support of STEM education at the mission agencies, as they are part of the scientific community and in the best position to anticipate the impending technical and scientific challenges facing their agencies and the next generation of scientists.

As the NSF is the only federal agency charged with supporting basic research, we fear a shift from basic to applied research could fundamentally erode the opportunity to provide the basic knowledge that may be required to address challenges facing the next generation.

The U.S. has led the world in research and technology since World War II because our nation adopted an academic, university- and laboratory-based research enterprise partnering with the federal government. Our remarkably high return on investment for federally supported research is due to the fact that the best science—and its application to the nation’s problems—rise to the top in our competitive, peer-reviewed system. Furthermore, the political independence of academic researchers and their institutions has engendered trust from the public and support of the business community. The U.S. NSF is the world’s gold standard for supporting research. We feel that the provisions in section 104 to assure that grants are in the national interest, worthy of funding, and would add substantial original research, would increase the administrative burden on researchers (who already spend roughly 42 percent of their time on pre- and post-award administrative activities1), and are unnecessary given current policies in place to ensure that research grants are of the highest quality and merit funding. Fundamental research is best left unencumbered—to the maximum extent practicable—by political and legislative guidance. Instead, Congress should encourage NSF, through input provided by the National Science Board and multiple NSF Advisory

---

1 A PROFILE OF FEDERAL-GRANT ADMINISTRATIVE BURDEN AMONG FEDERAL DEMONSTRATION PARTNERSHIP FACULTY
A Report of the Faculty Standing Committee of the Federal Demonstration Partnership
Committees, to develop funding initiatives that maximize the intellectual and innovative capacity of the science and engineering communities to address issues of societal and economic concern. In addition, the sharing of award justifications before awards are made could threaten the integrity and confidentiality of the independent peer review process, and result in the publicizing of intellectual property included in unsuccessful awards.

There are powerful examples of how the intersection of the social sciences with the natural sciences is critical for helping make decisions that protect people and property, including Superstorm Sandy, Hurricane Katrina, and the Deepwater Horizon oil disaster. These three recent examples illustrate how the marine environment can have major, devastating, and long-lived impacts on lives and economies. Where forecasts were accurate, they saved lives during Superstorm Sandy. However, the people of New Orleans were not as fortunate, and communities throughout the Gulf were uninformed for far too long about the distribution of oil, gas, and dispersants of the oil spill event. In these examples, the integration of natural and social science research had a huge impact on the communities affected by the storm. Consequently, we are concerned with section 105 of the discussion draft which treats social sciences differently than the physical sciences. Continued support by NSF of social and behavioral sciences is integral to the nation’s overall scientific and research enterprise, and social and behavioral research by NSF and other agencies (e.g., NOAA) can be particularly beneficial in maximizing the effective communication and use of scientific findings to both public and private decision-makers. As storms intensify, sea-levels rise, species migrate, ecosystems change, and fresh water becomes less available, the need to better understand and help guide human decision making and policy formulation is increasingly important and should not be short changed.

While we understand the desire to obtain the highest number of results from limited resources during the current fiscal situation, we are concerned with your approach. The nature of basic research does not lend itself to being overly directed or prescriptive. We fear this shift from basic to applied research could fundamentally erode the basic knowledge that may be required to address challenges over the horizon. Although scientists’ narrow focus on their areas of expertise allows cutting edge breakthroughs, we need policymakers to be far-sighted and allow for a broad range of science to be undertaken.

Finally, I would like to express our appreciation for the Committee’s approach to foster innovation and encourage the next generation to pursue science and engineering careers. Seeking stakeholder input ahead of proposed changes, consolidations, or elimination of current federal STEM programs is essential. We believe that the mission agencies and their extramural partners should continue to have a significant role in education and training as they are part of the scientific community and in the best position to anticipate the impending technical and scientific challenges facing their agencies and help train the next generation of scientists.

We welcome the opportunity to work with the Committee in building the strong science framework necessary to facilitate discovery and innovation while nurturing and training the next generation of scientists. Both efforts are crucial to keeping America competitive.

Regards,

Robert B. Gagosian
President and CEO
Consortium for Ocean Leadership

cc: The Honorable Eddie Bernice Johnson