Dear Chairman Rockefeller and Ranking Member Thune:

Thank you for the opportunity to comment on the discussion draft of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Reauthorization Act of 2014 (America COMPETES). We greatly appreciate your leadership in supporting federal research over the years and share your desire to ensure that public funds are invested wisely so that research can improve the quality of life of Americans for generations to come.

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. The political independence of academic researchers and their institutions has engendered trust from the public and furthermore supports the business community transitioning federally sponsored basic research into products and services that bolster the national economy.

Given that the National Science Foundation is the world’s gold standard for supporting research, we strongly support the healthy budget authorizations in Section 502 of the discussion draft. Furthermore, we are pleased to see that the discussion draft allows for the Foundation to continue setting directorate level funding allocations. We hope that NSF will remain the place where the best minds in the nation can pursue their ideas free of political guidance or intervention, thus continuing the Foundation’s extraordinary history of forging the foundation for which future discoveries will be based. It is critical that NSF maintains its core mission to support basic research, whereas the mission agencies can continue to foster more applied and advanced research.

We appreciate your efforts to alleviate the administrative burden associated with federally sponsored research which is a concern for research institutions, particularly smaller ones with younger professionals. We particularly support Section 104(c) seeking stakeholder input ahead of proposed changes as essential and appreciate the Committee including external recommendations through consolation and stakeholder input. Departing from performance metrics based on number-based outputs is essential for understanding the true success of educational programs. We also support the addition of educational outcomes as a performance metric for NOAA’s science education plan, as outlined in Section 301 of the bill. Section 503(b)(4)(B) expresses Congress’s continued support for engagement between scientists, particularly through scientific conferences, and is also greatly appreciated.

Given that we are living in a time of rapid change to the physical environment, it is essential that NSF continues to support the Geosciences so that society will be better prepared to address the growing challenges of flooding, drought, intensified storms, sea level rise, altered disease vectors and access to fresh water. We don’t know when or where the next disaster will strike, but the knowledge that NSF supports is essential for ensuring we will be better prepared in the future. For instance, in response to the Deepwater Horizon Oil Spill, NSF’s Rapid Grants were essential in supporting scientists access to the site thereby facilitating understanding of what was occurring to the oil and dispersants, including tracking the subsurface hydrocarbon plume.
To this end, we suggest adding in the following at Section 503(a)(5):

The Foundation’s investments in the basic research that underpins the geosciences have addressed national and global challenges, spurred new economic sectors, and led to the development and implementation of advanced technologies that save lives, protect property, and support our economy, including --

- Knowledge creation in hazard-related sciences that improves our understanding, forecasting and prediction of earthquakes, tsunamis, volcanoes, landslides, hurricanes and other man-made and natural disasters;
- A reduction in U.S. dependence on foreign sources for critical minerals including niobium which is used for superalloys in defense technologies, and tantalum, an integral component in advanced electronics;
- A more robust weather enterprise which is responsible for $9 billion a year in direct and indirect economic impacts, employs over 20,000 people, and generates $1 billion a year in tax revenues;
- Successful harnessing of renewable energy from the oceans to reduce our dependence on foreign sources of energy while reducing our carbon footprint;
- The study of marine organisms that have led to development of drugs that treat cancer, viral diseases, AIDS, leukemia and lymphomas;
- The development of a work force needed by the private sector for energy, aviation, transportation, risk assessment, and insurance industries;

We would also suggest inserting the word "geosciences" into Section 503(a)(2) after “biological”, and to the end of Section 503(b)(4)(A), before “social, behavioral, and economic…” to best balance the findings of Section 503(a) with support in the Sense of Congress in Section 503(b).

Finally, we 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 by making STEM education a priority. As we have expressed previously, we have deep concerns with the Administration’s efforts to consolidate STEM initiatives. 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. To wit, Section 505(b)(3) establishes as policy that alterations to the nation’s STEM initiatives should be done in a thoughtful manner only after program evaluations and consideration of contribution to the agency. We support the efforts to broaden participation in science, especially competitive grants for institutions of higher learning for STEM internships and outreach programs to elementary and secondary schools (Section 510(b)(2) and (3)).

In Section 508(b), the draft mentions only NSF’s Division of Undergraduate Education (DUE), but does not identify a role for the Science Divisions/Directorates. We believe that the Science Directorates/Divisions are well qualified to place students in research environments and should be given a major—responsibility for this role. The Graduate Traineeship Grant Program, outlined in Section 514, would possibly be beneficial for mentoring the scientists of tomorrow, providing an excellent opportunity for both young scientists as well as for science institutions.

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
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Thomas J. Bogdan
President
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William Monty Graham
Board Chairperson
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Cc: The Honorable Bill Nelson, Chairman, Science and Space Subcommittee
    The Honorable Ted Cruz, Ranking Member, Science and Space Subcommittee