Public Comment Submitted by National Academy of Sciences President Neil H. Shubin

Re: OMB Proposed Rule, Guidance for Federal Financial Assistance, 2 CFR §200.205

The National Academy of Sciences (NAS) appreciates the opportunity to comment on the Office of Management and Budget's proposed revisions to 2 CFR §200.205. The NAS supports the stated goals of transparency, accountability, and sound stewardship of federal taxpayer dollars — goals reflected in long-standing work by the National Academies of Sciences, Engineering, and Medicine, including the foundational report "*Allocating Federal Funds for Science and Technology*." It is precisely from that basis — and from the Academy's role as the nation's independent, nonpartisan scientific adviser since 1863 — that I write on behalf of the NAS with serious concerns and a call for revision.

For more than 80 years, American global leadership in science, technology, and medicine has rested on a clear path with defined roles: elected leaders set national priorities and allocate resources, agencies define missions and funding opportunities, and independent experts evaluate scientific merit via peer review. Peer review, as defined by our above report, requires technical expertise equivalent to the work being reviewed as well as independence from that work. A political appointee without relevant expertise in fields such as quantum computing, fusion energy, or cancer immunotherapy should not be positioned to substitute political or policy judgment for expert assessment of scientific or technical merit, regardless of how the review is characterized.

By specifying that the merit review process for discretionary awards must include pre-issuance political review by one or more senior appointees (or their designee), OMB's proposed revisions risk damaging the national research enterprise and the economic, medical, and social benefits that derive from it. The history of American science offers exemplars: The basic research that produced the internet, gene editing, and MRI medical scanning was not immediately recognizable as strategically vital or of political importance. These topics were pursued because technical experts judged them scientifically sound and promising. Moreover, subjecting such decisions to political pre-approval based on shifting criteria would also impose short-term political logic on an enterprise that often operates on decade-long time horizons, thereby damaging the funding stability that scientific infrastructure, strategic risk-taking, and research that takes a long-term commitment require.

The partnership between government and the research community — that elected leaders set goals, agencies define missions, and independent experts evaluate merit — has been the template of American scientific excellence. The cost of losing this arrangement will be measured not in reduced regulatory burden, but in an American research enterprise highly vulnerable to political considerations at the expense of scientific discovery, technological innovation, and international competitiveness.

I therefore call upon OMB to revise the proposed rule as follows:

- Clarify that any pre-issuance review by senior appointees or their designees should be tied to statutory authority; agency mission and priorities; and published program objectives.
- Seek to preserve, rather than supplant, expert assessment of scientific and technical merit in the pre-issuance review process. When a final award decision differs materially from the outcome of the merit-review process, it should include reference to objective criteria that were published in the Notice of Funding Opportunity.
- Ensure that any termination of active peer-reviewed grants prior to their expected completion occurs only through objective, documented review tied to award performance, award compliance, or the award's stated programmatic purposes, and is expressly insulated from political direction unrelated to the merits or purposes of the award.
- Affirmatively protect long-term, fundamental, and exploratory research from disadvantage solely because near-term benefits are not immediately demonstrable.

I further endorse the companion comments submitted by the National Academy of Medicine and the National Academy of Engineering, and underscore two additional dimensions of the proposed rule that bear directly on leadership in both basic and applied science.

First, discovery does not observe national borders, and much American leadership in basic and applied advances has depended on the free movement of investigators, cohorts, and data across institutions worldwide. The examples span the scientific enterprise:

- the Human Genome Project, completed through a consortium of sequencing centers across the United States, United Kingdom, France, Germany, Japan, and other countries, gave American medicine the reference on which modern genomics and precision oncology now rest; the CRISPR gene-editing tools that originated in a transatlantic partnership between investigators in the United States and Europe have become a foundation of American biotechnology;
- the discovery of the Higgs boson particle and the detection of gravitational waves were achievements of international consortia numbering in the thousands; and
- the mRNA vaccine platforms that met the COVID-19 pandemic matured through collaboration among scientists and firms working across national borders.

Provisions that would broadly confine research and development awards to domestic entities, or subject international program elements to senior political approval, would sever American scientists from the very collaborations, cohorts, and talent pipelines on which continued leadership depends.

Second, the value of independent scientific advice and the open dissemination of results — through publication, convening, and public engagement — derive from their insulation from political direction. Providing federal support only on the condition of reaching certain substantive conclusions in such activities, or discouraging engagement

with legitimate but sensitive questions, would erode the independence that makes expert assessment credible in the first place, and would diminish the return — in economic growth, technological innovation, national security, public health, and other societal benefits — that the nation draws from its investment in basic and applied science alike.

Reference: “Allocating Federal Funds for Science and Technology,” 1995, Washington, DC: The National Academies Press (https://www.nationalacademies.org/publications/5040)