UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

ASSOCIATION OF AMERICAN UNIVERSITIES, ET AL., *Plaintiffs*, v. DEPARTMENT OF HEALTH AND HUMAN SERVICES, ET AL., *Defendants*.	Case No. 1:25-cv-10346

MOTION FOR A TEMPORARY RESTRAINING ORDER

This suit challenges a flagrantly unlawful action by the National Institutes of Health ("NIH") and the Department of Health and Human Services ("HHS") that, if permitted to stand, will devastate medical research at America's universities. On December 7, 2025, NIH—with no prior notice—announced Guidance implementing 15% cap on "indirect costs" for all existing and future grants by the NIH, set to go into effect today, February 10.[1] That Guidance is clearly unlawful, including because it violates an appropriations rider Congress enacted to prevent NIH from doing exactly what the Guidance attempts. And that unlawful guidance will, starting *today*, result in immediate and irreversible harm to Plaintiffs—the Association of American Universities ("AAU"), the American Council on Education ("ACE"), the Association of Public and Land-Grant Universities ("APLU"), and several individual universities.

[1] *See* Notice NOT-OD-25-068 ("Guidance"), available at https://grants.nih.gov/grants/guide/notice-files/NOT-OD-25-068.html.

Plaintiffs respectfully move the Court, pursuant to Fed. R. Civ. P. 65(b), to enter a temporary restraining order against HHS, NIH, Acting Secretary of HHS Dorothy A. Fink, and Acting Director of NIH Matthew J. Memoli (collectively, "Defendants"), prohibiting Defendants, their agents, and anyone acting in concert or participation with Defendants from implementing, instituting, maintaining, or giving effect to the Guidance in any form; from otherwise modifying negotiated indirect cost rates except as permitted by statute and by the regulations of the Office of Management and Budget and HHS; and from expending appropriated funds in any manner contrary to Section 224 of the Further Consolidated Appropriations Act, 2024, Pub. L. No. 118-47.

Plaintiffs further request that within 24 hours of the temporary restraining order, Defendants provide written notice of the Order to all funding recipients affected by the Guidance and that, further, they notify the Court that they have done so within 48 hours of the temporary restraining order.

As set forth in the accompanying memorandum and as supported by the exhibits filed with this Motion, Plaintiffs have established a strong likelihood of success on the merits of their claims; that they will suffer irreparable harm absent relief; and that the balance of equities and the public interest weigh strongly in favor of a temporary restraining order.

Dated: February 10, 2025

JENNER & BLOCK LLP

By: */s/ Shoba Pillay*

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Respectfully submitted,

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Attorneys for Association of American Universities, Association of Public and Land-grant Universities, and American Council on Education

CERTIFICATE OF SERVICE

Counsel for Plaintiffs certify that they have submitted the foregoing document with the clerk of court for the District of Massachusetts, using the electronic case filing system of the Court. Counsel for Plaintiffs hereby certify that they have served all parties electronically or by another manner authorized by Fed. R. Civ. P. 5(b)(2).

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Dated: February 10, 2025

CERTIFICATE OF COMPLIANCE

Pursuant to Local Rule 7.1(a) and Federal Rule of Civil Procedure 65(a)(1), counsel for Plaintiffs certify that they have contacted the following individuals at the U.S. Department of Justice by electronic mail to provide notice of this motion:

Eric J. Hamilton
Deputy Assistant Attorney General, Federal Programs Branch
eric.hamilton@usdoj.gov

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As of the time of filing, Defendants have not responded.

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Dated: February 10, 2025

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

ASSOCIATION OF AMERICAN UNIVERSITIES, ET AL., *Plaintiffs*, v. DEPARTMENT OF HEALTH AND HUMAN SERVICES, ET AL., *Defendants*.	Case No. ___

[PROPOSED] ORDER GRANTING PLAINTIFFS' MOTION FOR A TEMPORARY RESTRAINING ORDER

The Court hereby grants Plaintiffs' Motion and enters a temporary restraining order pursuant to Fed. R. Civ. P. 65(b) against Defendants the Department of Health and Human Services (HHS), the National Institutes of Health (NIH), Acting HHS Secretary Dorothy A. Fink, and Acting Director of NIH Matthew J. Memoli (collectively, "Defendants") prohibiting Defendants, their agents, and anyone acting in concert or participation with Defendants from implementing, instituting, maintaining, or giving effect to the Guidance in any form; from otherwise modifying negotiated indirect cost rates except as permitted by statute and by the regulations of the Office of Management and Budget and HHS; and from expending appropriated funds in any manner contrary to Section 224 of the Further Consolidated Appropriations Act, 2024, Pub. L. No. 118-47.

The Court further orders that within 24 hours of this Order, Defendants provide written notice of the Order to all funding recipients affected by the Guidance and that, further, Defendants

notify the Court that they have done so within 48 hours of this Order.

It is so ordered.

/s/
District Judge

EXHIBIT 2

DECLARATION OF PETER MCDONOUGH

I, Peter McDonough, declare as follows:

1. I am Vice President and General Counsel for the American Council on Education ("ACE"), having joined ACE in January 2015. I make this declaration in support of the Plaintiffs' Complaint in this matter and the forthcoming Emergency Motion for a Temporary Restraining Order.

2. I have personal knowledge of the contents of this declaration or have knowledge of the matters based on my review of information and records gathered by ACE personnel and personnel from our member universities, and could testify thereto.

3. Founded in 1918, ACE is a membership organization composed of more than 1,600 colleges and universities, related associations, and other organizations in America and abroad. ACE is the only major higher education association to represent all types of U.S. accredited, degree-granting colleges and universities. Its members educate two out of every three students in all accredited, degree-granting U.S. institutions.

4. ACE's mission includes collaborating across the higher education sector to design solutions for today's challenges and shape effective public policy. A core reason for the organization's existence is to advocate for public policies that support its members' interests, including their interests in obtaining support for academic research.

5. ACE has members in all 50 states and the District of Columbia.

6. ACE member universities include Case Western Reserve University, Cornell University, Princeton University, SUNY Stony Brook University, Tufts University, University of Florida, and University of Wisconsin-Madison. I understand that these ACE members and several

others are submitting declarations in this litigation, which provide institution-specific detail on the matters described below.

7. The federal government has selected ACE member universities to conduct a wide variety of vital research on behalf of United States citizens, funded in part by agency awards from across the federal government, including but not limited to the Department of Health and Human Services ("HHS") and its National Institutes of Health ("NIH"). ACE member universities' work on sponsored awards issued by NIH studies important health issues, saves and improves lives, and adds immeasurably to our national welfare and our economy.

8. On February 7, 2025, NIH issued Notice NOT-OD-25-068, "Supplemental Guidance to the 2024 NIH Grants Policy Statement: Indirect Cost Rates" ("NIH Supplemental Guidance"). The NIH Supplemental Guidance provides that effective February 10, 2025, indirect costs allowed on all future awards and going-forward expenses for all existing awards shall be limited to fifteen percent.

9. If NIH's Supplemental Guidance is permitted to remain in effect, it will irreparably harm research at ACE member universities that directly benefits public health and American competitiveness. Such a drastic decrease in allowable indirect costs will immediately impair the ACE member universities' ability to conduct sponsored research in compliance with the underlying award agreements and applicable laws, and it will create cascading and longer-term harms as well.

10. The declarations submitted by ACE members in this litigation vividly illustrate the types of harms felt by all ACE members with NIH grant funding.

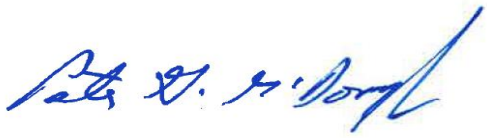
11. Moreover, the harmful impact of the NIH Supplemental Guidance is not limited to ACE member universities. Many ACE member universities are the largest employers in their local

areas. Where the lower indirect cost reimbursement rate requires layoffs, that loss of employment will be harmful not only to the affected employees and their families, but to the overall economic stability of the ACE member universities' hometowns as a whole.

12. In addition, the NIH Supplemental Guidance will undermine the feasibility of sponsored activity that results in medical and scientific breakthroughs that provide significant social and economic value to the country, sometimes opening up entirely new areas of commercial development.

13. Temporary injunctive relief is critical to protect against these devastating consequences.

I declare under penalty of perjury that the foregoing is true and correct.



Dated: February 10, 2025
Washington, DC

EXHIBIT 3

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

ASSOCIATION OF AMERICAN UNIVERSITIES, *et al.*, Plaintiffs, v. DEPARTMENT OF HEALTH & HUMAN SERVICES, *et al.*, Defendants.	Case No.

DECLARATION OF MARK BECKER

I, Mark Becker, declare as follows:

1. I am the President of the Association of Public & Land-grant Universities ("APLU"). I have held that position since September 2022. I previously served as a member of APLU's Board of Directors and as Chair of the Board for the Coalition of Urban Serving Universities. Prior to leading APLU, I spent more than three decades at the different types of universities that comprise APLU's membership, including as a post-doctoral fellow, professor, dean, provost, and university president. I make this declaration in support of Plaintiffs' Complaint in this matter and the forthcoming Emergency Motion for a Temporary Restraining Order.

2. As President of APLU, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by APLU personnel, and could testify thereto.

3. Founded in 1887, APLU is a membership organization that fosters a community of university leaders collectively working to advance the mission of public research universities. Its

U.S. membership consists of more than 230 public research universities, land-grant institutions, state university systems, and affiliated organizations spanning across all 50 U.S. states, the District of Columbia, and six U.S. territories. Our members include universities ranging from rural to urban institutions, and from emerging research institutions to the most highly intensive centers of academic research. APLU and its members collectively focus on increasing student success and workforce readiness, promoting pathbreaking scientific research, and bolstering economic and community engagement.

4. In particular, APLU supports a community of public research university leaders to address the challenges facing their communities, states, country, and world. APLU advocates for "public impact research," a broad label used to describe how university research positively impacts society, and it strives to help university leaders emphasize the value of collaborative research with communities. APLU's member institutions, in turn, are on the front lines seeking cures and treatments for healthcare challenges facing the American people.

5. The federal government has selected APLU member institutions to conduct a wide variety of vital research on behalf of American citizens, funded in part by agency awards from across the federal government, including but not limited to the Department of Health and Human Services ("HHS") and its National Institutes of Health ("NIH"). For example, in fiscal year 2024, APLU member institutions received more than $11 billion in research grant funding from NIH.

6. APLU member institutions work on cutting-edge research sponsored by NIH that targets important medical issues, saves and improves lives, and adds immeasurably to the nation's economy and prosperity. These funded studies have a direct impact on health outcomes nationally—they lead to the development of new treatments, cures, diagnostics, and other health interventions, and they inform health policies that improve the quality of life for millions of people.

NIH-funded researchers at APLU member institutions across the country work tirelessly toward breakthroughs in treating and developing cures for debilitating diseases, including cancer, neurological diseases, infectious diseases, and chronic diseases such as diabetes and heart disease.

7. On a typical NIH grant, the funding amount must cover both "direct costs," which are expenses directly related to the specific grant activity, and "indirect costs," which cover essential overhead expenses such as facilities, equipment, utilities, support staff, and financial administration. Indirect costs also include operations that allow research to proceed safely and responsibly, such as proper hazardous waste disposal and compliance with government regulations regarding animal and human subject safety. Indirect cost reimbursements are vital to the operation of the federally funded research system, which includes the NIH-sponsored activities conducted at APLU member institutions. Direct allocable costs on NIH awards fall well short of covering the real, comprehensive cost of sponsored research, as they do not reflect the full facilities and administration costs that APLU member institutions must incur in order to be able to perform the work.

8. On February 7, 2025, NIH issued Notice NOT-OD-25-068, "Supplemental Guidance to the 2024 NIH Grants Policy Statement: Indirect Cost Rates" ("NIH Supplemental Guidance"). The NIH Supplemental Guidance provides that effective February 10, 2025, indirect costs allowed on all future awards, as well as go-forward expenses for all existing awards, will be limited to fifteen percent.

9. The NIH Supplemental Guidance creates an immediate financial emergency for many APLU member institutions that rely on NIH funding, impacting institutions both small and large. If the NIH Supplemental Guidance is permitted to remain in effect, it will irreparably harm research at APLU member institutions—research that directly benefits public health and American

competitiveness. Such a dramatic reduction in allowable indirect costs on three days' notice—especially for ongoing research activities that APLU member institutions have already budgeted for in their current fiscal year—will immediately impair the universities' ability to conduct sponsored research in compliance with the underlying award agreements and all applicable laws.

10. Specifically, a dramatically reduced indirect cost rate will lead to cuts in the operating budget for personnel who support the research enterprise both directly and indirectly, including research staff, research administration officers, security, technical maintenance, financial staff, and janitorial staff. It will also have harmful impacts on lab maintenance, library operations, IT operations, the purchase and renovation of specialized facilities, and utilities. Moreover, this harm is not limited to monetary damages that can be rectified with a compensatory award later on. Even if the indirect cost rate were increased at a later date, if a research facility must be closed in the interim because its operation and maintenance can no longer be supported, or if key personnel or materials are lost, then the APLU member institution would immediately lose its ongoing investment in that research infrastructure and likely have a diminished ability to restart or undertake that research in the future.

11. Reliance interests are also at stake. For each NIH award, APLU member institutions necessarily rely on both the direct cost and indirect cost allocations in formulating their overall operating budgets for any given year. These allocations are used to plan for annual staffing needs, infrastructure support (e.g., IT networks, regulatory compliance, and grant management support), facility building and renovation, and equipment purchases to support a broad range of overlapping research activities.

12. The devastating impact of the NIH Supplemental Guidance is not limited to APLU member institutions. Many APLU member institutions are the largest employers in their local

regions. If the reduction in the indirect cost rate requires personnel cuts, that loss of employment will not only harm the affected employees and their families, but also the overall economic stability of APLU member institutions' local communities. The APLU member institution may also have to reduce the amount of equipment, labor, and local services used to maintain its facilities, lowering the overall economic activity in the local area.

13. More broadly, the NIH Supplemental Guidance will undermine the continuity and feasibility of sponsored research that results in countless medical and scientific breakthroughs, which provide significant social and economic value to the nation. The United States is a stronger, more secure, and more economically vibrant country as a result of the collective benefits arising from federally sponsored research. In addition, the next generation of scientists, physicians, engineers, and other skilled workers develop their critical expertise while learning and working at research universities such as APLU member institutions. The NIH Supplemental Guidance would drastically reduce the positive impact of this work, as well as the pipeline of educated professionals that U.S. industry relies on to be internationally competitive. Slowdowns or halts in federally funded research by APLU member institutions will allow competitor nations, who are properly maintaining their investments in research, to surpass the United States on this front, threatening American national security and economic dominance.

14. Temporary injunctive relief is needed to protect against these disastrous consequences. Even if the NIH Supplemental Guidance is ultimately rescinded or held to be invalid, APLU member institutions do not have the ability to cover such a dramatic reduction in indirect cost recovery during the course of protracted litigation. Nor can APLU member institutions' endowments be simply redirected to make up for these losses. Endowments are an important institutional asset that provide universities with stability over time, allowing campus

leaders to think long-term about how best to meet the needs of their communities. Endowments are also complex assets with many legal requirements stipulating how they can be used. And not all universities have large endowments, or any endowment at all—in fact, of the public institutions that have endowments, nearly half are valued at less than $50 million. Even for the public universities with the largest endowments, they are still relatively modest after taking into account the student populations of those institutions. It is important to consider an institution's endowment size relative to the number of students that institution serves—individual public universities can serve tens of thousands of students, and the largest public university systems serve hundreds of thousands of students.

15. While ranging among states and institutions, public universities receive substantial operational funding from their states for education, though support for scientific research is largely the responsibility of the federal government. Public universities cannot expect states will fill the substantial financial gaps created by NIH's reductions.

16. As non-profit institutions, APLU member institutions reinvest nearly all of their revenues into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, APLU member institutions do not generate significant financial surpluses that could be redirected without impacting core academic priorities such as education programs and financial aid support for students.

17. Absorbing the cost of a lower indirect cost rate, even if it were possible, would also create long-term budget pressures on APLU member institutions—which would in turn force reductions in key investments supporting APLU member institutions' faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain APLU member universities' academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025, within the District of Columbia.

Mark Becker

EXHIBIT 4

DECLARATION OF STEVEN F. KAREL

I, Steven F. Karel, declare as follows:

1. I am the Vice Provost for Research at Brandeis University ("Brandeis") in Waltham, Massachusetts. I have held that position since September 1, 2021.

2. As Vice Provost for Research, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Brandeis personnel, and could testify thereto.

3. Brandeis receives substantial annual funding from the National Institutes of Health ("NIH"). In the last fiscal year, Brandeis was awarded a total of $37.4 million from NIH in total costs, of which $11.0 million were in indirect costs, spread across 90 different awards.

4. The funding Brandeis receives from NIH supports critical and cutting-edge research, which millions of Americans benefit from and depend on. For example:

   a. In the area of cancer research, Kaushik Ragunathan's R35 grant "Capturing the dynamic epigenome using single molecule and single cell approaches" is focused on understanding how the cells in our body remember who they are and what types they are supposed to be. Cancer is a disease of cells forgetting how to be normal. Learning to reverse this process under normal and diseased conditions is critical to developing therapies for cancer and regenerative medicine.

   b. In the area of neuroscience, Suzanne Paradis's R01 grant "Semaphorin-Dependent GABAergic Synapse Formation: A Novel Approach to Increasing Inhibition in the Intact Brain" studies a molecule that suppresses seizures in epilepsy models. They are currently working to translate this finding into a

drug for humans. This drug would have the ability to treat the approximately 1 million Americans whose seizures are not controlled by current available medication.

c. In the area of chemical biology, Lizbeth Hedstrom's R01 grant "Ubiquitin-independent targeted protein degradation" is creating new strategies for drug design that can be applied to the treatment of cancer, neurodegeneration and infectious diseases. Disruption of the work will delay the development of potentially life-saving therapies.

5. Indirect costs are essential for supporting this research. The NIH's proposal to cut indirect cost rates to 15% would end or seriously jeopardize all of the NIH-funded research projects being conducted at the university.

6. Indirect costs include equipment and facilities, such as: constructing and maintaining state-of-the-art facilities required to meet the current technical requirements of advanced research, as well as the procurement and maintenance of equipment necessary to conduct such research. Without this supporting infrastructure, we cannot conduct the research.

7. For example, with respect to the areas of research described in Paragraph 4:

a. In the area of Ragunathan's research, flow cytometry and mass photometry are necessary technologies to look at individual cells and size distributions in experiments. Without the indirect costs, we will be unable to continue setting up and supporting this facility.

b. In the area of Paradis's research, resonant scanning confocal microscopy with environmental incubation is used to allow extremely fast and gentle multiple color imaging while maintaining physiologic environmental conditions. She

also uses the super resolution Stimulated Emission Depletion microscopy to visualize changes at the synapse level. These microscopes are maintained as part of our imaging facility which requires the indirect costs to operate.

c. In the area of Hedstrom's research, drug development requires specialized equipment such as NMR spectrometers, mass spectrometers, electron microscopes, cell culture facilities and chemical synthesis equipment to synthesize and evaluate drug candidates. Without the indirect costs, Brandeis would be unable to maintain its mass spectrometry facility and to continue to operate its 800 MHz NMR spectrometer.

8. Physical space costs are one of the largest components of indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research that can be done at Brandeis. A significant reduction in funding would likely cause Brandeis to either close facilities or operate at reduced schedules with fewer personnel.

9. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH.[1] These mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

[1] https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf

10. Recovery of Brandeis's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

11. The university has negotiated multiple indirect cost rates with NIH. They are for: Research - on campus, Instruction - on campus, Other Sponsored Activity - on campus, All Programs (mostly research) - off campus. Our rates were entered into in an agreement dated June 2, 2023 and received on June 7, 2023. These rates extend through FY2027. The rates are FY24 - 59.5%, FY 25-26 - 59.5%, and FY27 - 60.5%. The instruction rate is 57.1%, Other Activity is 36.0%, and Off Campus is 26.0% (Administrative cap).

12. The impact of a reduction in the indirect cost rate would be devastating. Of the $37.4 million in NIH funding that Brandeis received in the last fiscal year, approximately $21.3 million was allocated for direct costs, $5.1 million for subcontracts and equipment purchases (which are not eligible for overhead recovery), and $11.0 million for indirect costs. Similarly, in fiscal year 2025, Brandeis expects to receive $22 million in NIH funding for direct costs, while $11 million is allocated for indirect costs. And over the next five years, Brandeis anticipates receiving an average of $24 million from the NIH for annual direct costs. Based on the predetermined indirect cost rate of 59.5-60.5%, which was agreed upon by the federal government as of June 2, 2023, the University thus expects to receive approximately $11 million in indirect cost recovery on an annual basis.

13. If—contrary to what Brandeis has negotiated with the federal government—the indirect cost rate is reduced to 15%, that would reduce the University's anticipated annual indirect cost recovery by approximately $7.5 million.

14. This reduction will have deeply damaging effects on Brandeis's ability to conduct research from day one. It will cause Brandeis to have to immediately consider significantly

reducing research operations, as well as reductions in researchers, research support staff, and administrators who facilitate those research operations.

15. Brandeis has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. Brandeis also has long-term obligations—for example, such as tenured faculty salaries and admitted PhD students—and it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments.

16. In addition to the immediate impacts and reliance interests described above, there are longer term impacts that are both cumulative and cascading. These cuts will cause Brandeis to have to reduce the number of Ph.D. students it admits as well the number of faculty it hires to conduct research. The university's support and safety infrastructure will also be adversely impacted as personnel reductions will have to be made across the research enterprise.

17. Finally, slowdowns or halts in research by Brandeis and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance.

18. Nor can Brandeis cover the funding gap itself. While Brandeis maintains an endowment, it is neither feasible nor sustainable for Brandeis to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

a. The majority of Brandeis's endowment—around 90%—is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. Brandeis is not legally permitted to use those funds to cover research infrastructure costs.

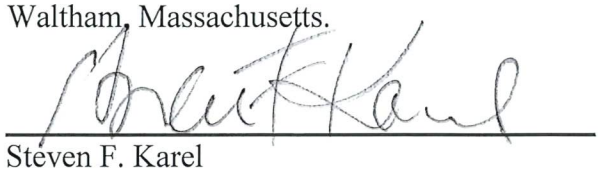
b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically around 4.5-5.5%, to ensure long-term financial stability for the institution. Brandeis recently had to increase the amount of its endowment payout to address significant financial challenges and cannot draw further without seriously compromising its financial stability.

c. As a non-profit institution, Brandeis reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, Brandeis does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

19. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on Brandeis—which would in turn force reductions in key investments supporting Brandeis's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain Brandeis's academic excellence. Our operations for the past few years have had an operating margin of under 0.5% and the University ran at a slight loss in the most recent fiscal year (FY24). There is no cushion to absorb a reduction in the rate. As it is the university had a reduction in force in the spring of 2024. Further revenue reductions could lead to further pressure on university operations.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025 at Brandeis University, 415 South Street, Waltham, Massachusetts.



Steven F. Karel
Vice Provost for Research

EXHIBIT 5

DECLARATION OF DR. GREG HIRTH

I, Greg Hirth, declare as follows:

1. I am the Vice President for Research at Brown University ("Brown") in Providence, Rhode Island. I have held that position since February 4, 2025, after serving as interim Vice President for Research starting in September 2024. I am also a Professor of Earth, Environmental, and Planetary Science, and a federally funded researcher. I have been on the faculty at Brown University since 2007.

2. As Vice President for Research, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Brown University personnel, and could testify thereto.

3. Brown is a major research institution that receives significant funding from the Department of Health and Human Services ("HHS"), including from the National Institutes of Health ("NIH"). This funding supports cutting-edge, multi-year research projects in furtherance of public health and emerging areas of science and technology.

4. Specifically, as the university with the only schools of public health and medicine in Rhode Island, Brown conducts critical research directed at major health challenges, including cancer, aging, dementia, heart disease, immune disorders, mental health disorders, and childhood illnesses. Clinical trials conducted at or through Brown, or involving Brown faculty, bring life-saving medicines to those who are battling cancer, heart disease, opioid addiction, and mental health conditions, as well as vulnerable patients who are newborn, children, or pregnant.

5. Examples of critical, NIH-funded research projects being conducted by Brown include:

a. Research funded by $71 million from NIH over six years (July 2019 through June 2025) to accelerate the science of dementia care through embedded pragmatic clinical trials, which impacts millions of Americans and their care partners;

b. Research funded by $660,000 from the National Institute of Diabetes and Digestive and Kidney Disease for the first year of a 2.5-year project to study methods to improve nutrition and healthy eating habits of preschool-aged children;

c. Research funded by what is anticipated to be $6.6 million over approximately 3.5 years (August 2024 through May 2029) from the National Heart, Lung and Blood Institute to study the early identification and prevention of coronary heart disease.

d. Research funded by a total of $133 million from NIH prime awards and subawards to study the many facets and impacts of Alzheimer's disease, including the pathophysiology of Alzheimer's disease and how to improve treatment for patients with Alzheimer's disease.

6. In addition to advancing scientific and medical innovation in the national interest, Brown's research also supports local and state communities. As a vital anchor institution and top 10 employer in Rhode Island, Brown plays a major role in the economic well-being of the state and its residents. Brown employs healthcare professionals and skilled researchers in its own hospitals, research institutions, and schools, and it works with two other major Rhode Island hospital systems—Lifespan Corporation and Care New England—to conduct research in the state. Brown has already made, and intends to continue making, significant financial, intellectual,

contractual, and personnel investments in the Brown Innovation and Research Collaborative for Health ("BIRCH"), a research collaboration between Brown and its affiliate hospitals.

7. Brown receives federal research funding in the form of sponsored grants and contracts, which normally provide for the recovery of certain indirect costs at contractually negotiated rates. Overall, in the 2024 fiscal year, Brown's federally sponsored grants and contracts totaled approximately $253 million, or 19% of Brown's operating revenues. Of that $253 million, approximately $69 million was in the form of indirect costs. In the current 2025 fiscal year, Brown's operating budget projects approximately $300 million in sponsored research, which represents 19% of the University's net revenue and includes approximately $73 million in indirect costs.

8. In the 2024 fiscal year, Brown recovered approximately $37 million in Facilities & Administrative ("F&A") costs from HHS for Direct Awards. In the 2025 fiscal year, to date, F&A costs amount to approximately $22 million fiscal year to date. In addition, for subawards where the prime awardee is federally sponsored, including by NIH, actual F&A costs for the 2024 fiscal year was approximately $9 million.

9. Indirect costs support critical infrastructure throughout individual Schools and the University's central administration that are necessary to provide support services to conduct research—such as research capital investments, information technology supporting research computing, facilities operations and maintenance, finance and human resources, as well as other aspects of general administration.

10. On February 7, 2025, NIH issued guidance directing the lowering of indirect cost rates to a universal 15% rate, applying not only to new grants but also to existing grants. This

reduction to the indirect cost rate, which is set to become effective on February 10, 2025, will have devastating effects on Brown's ability to conduct research, both short and long term.

11. Reducing the overhead rate for sponsored grants and contracts to 15% will disrupt Brown's research operations, impact operating budgets, personnel, and core infrastructure, all of which depend upon the current F&A cost recovery rate. Using FY24 financial data, had the indirect cost rate of Brown's sponsored grants and contracts been reduced to 15%, the University would have experienced a loss of approximately $27 million. For year-to-date FY25 research expenditures, the University would have experienced a loss of approximately $16 million (representing actual costs incurred from July 1, 2024 to February 8, 2025).

12. While budgets related to research are submitted approximately six months in advance of Brown's next fiscal year, grant awards are considered a major component of the University's multi-year financial plan, so any reduction in the F&A rate has a significant impact on Brown's multi-year planning and long-term strategic decision-making.

13. Even more immediately, a reduction in the F&A rate to 15% would require Brown to move very quickly to adjust its operations in order to absorb the loss of revenue. That could include cutting over 200 jobs for personnel that support our research enterprises and facilities, such as administrators, research coordinators, lab managers, animal care staff, custodial staff, security officers, plumbers, electricians, food service employees, clinical coordinators, and research nurses. For example, the University recently broke ground on a new $400 million research facility, which may not be feasible with a 15% overhead rate moving forward. This facility will provide labs and workspace for research in aging, immunity, brain science, cancer and biomedical engineering, among other fields. As the largest academic laboratory building in Rhode Island, it is expected to help anchor a biomedical ecosystem where innovations can move seamlessly from the laboratory

to patient care. In addition, if Brown were to pause or abandon that effort, it would eliminate many union constructions jobs; impact purchases of building materials and laboratory equipment that have already been made; and prevent Brown from hiring new faculty or staff that would have worked in the new facility.

14. It would further threaten Brown's ability to retain the next generation of our healthcare workforce, such as doctors, scientists, and nurses. Almost all of the School of Public Health's research is supported by NIH grants, so a dramatic reduction in funding would affect everything the School does. That includes its ability to recruit faculty; provide pilot funding to catalyze research projects; support faculty and research staff in between grants; and provide cost-sharing support for large, complex projects that exceed grant budgets.

15. There is no simpler way to put it: At a 15% indirect cost rate, many of Brown's current research projects and clinical trials will be forced to cease abruptly. Conducting research requires laboratory facilities, data processing and research computing equipment, privacy and ethical protections for human subjects, and qualified support staff who can ensure that projects are conducted safely, within budget, and in compliance with all relevant regulations. Although indirect costs do not cover the full costs of these activities, they are critical to Brown's ability to fund the research enterprise. Even a temporary interruption of work would threaten clinical trials that supply lifesaving medicine and risk derailing years of careful progress and efforts directed towards major health challenges.

16. The effects of stopping our research would extend beyond Brown, as the reduced utilization of research supplies, equipment, and services would immediately affect major suppliers, such as Thermofisher, VWR, and Fisher Scientific, that produce lab equipment and other supplies, and have serious ramifications for the entire supply chain that supports the research enterprise.

17. Even a temporary reduction in the indirect cost rate would have cascading effects on Brown's research projects and clinical trials. For example, clinical trials must generally be continuous to be effective, due to concerns for both patient care and trial validity. Such trials take years to set up, create, and perform. If these trials are forced to undergo a significant pause, they might be difficult, if not impossible, to restart, where the lack of continuity compromises the scientific results.

18. Forced closure of clinical trials will lead to an accompanying loss of accumulated research and knowledge, as skilled researchers will opt to leave Brown, and potentially the United States, in pursuit of viable work. This will inevitably lead to lost opportunities to develop U.S. intellectual property and U.S. startup companies. We also anticipate that existing challenges with training and retaining physicians, nurses, and other healthcare professionals will worsen, with direct impacts on patient care. For example, a reduction in funding may result in cuts to the training programs for the MD program at the medical school.

19. A reduction of the indirect cost rate to 15% would be swiftly felt in the local economy as well. The loss of jobs at Brown's affiliated hospitals and schools—which is estimated to number in the hundreds—not to mention loss of jobs in the private sector that support this work, would have an immediate negative impact on the local economy in Providence and across the state of Rhode Island. These losses would eventually spill over into other domains, such as restaurants, retail, and the service industry.

20. The cessation of major capital efforts, such as building new research facilities and labs, will have ripple effects across the economy, including in industries like construction.

21. Brown's efforts to streamline research in Rhode Island through BIRCH would also be negatively impacted, stymying opportunities for collaboration, patient care improvement, and healthcare and life sciences advancements throughout the state.

22. More broadly, the ecosystem of American medical, health, and scientific innovation depends upon university research, which in turn, feeds into the private biotechnology and pharmaceutical industries. This ecosystem would be significantly harmed by disruptions to federally sponsored, university-conducted research, with immense consequences for our nation's competitiveness, economy, and ability to respond to health crises.

23. Importantly, if NIH's indirect cost rate is reduced to 15%, Brown cannot simply make up for the resulting gap in funding through alternative means. Brown's full cost of research is already significantly more than what is covered by sponsored direct costs and indirect cost recovery. In the 2022 fiscal year, for example, Brown's full cost of research was estimated at $315 million, which was $66 million more than sponsored direct costs and indirect cost recovery. Brown made approximately $37 million in additional investments, including through research incentive programs, cost-sharing, and other programs. And Brown took on $28 million in "unrecovered" indirect costs. Because Brown's federal awards are capped at 26% for administrative costs, all Brown's administrative costs above 26% go unrecovered and are paid for by the University.

24. Any further increases in the gap between Brown's current cost of research and federally sponsored funding cannot be recouped from other revenue sources. Most notably, Brown's endowment, which provides an essential source of support for the University's financial aid, faculty salaries, and academic and co-curricular programs, consists of over 3,800 unique funds

that are legal contracts given as charitable gifts by alumni, parents, students, and friends of the University.

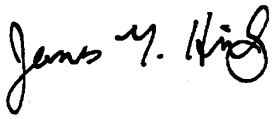
25. The purpose of Brown's endowment is to support the mission of Brown in perpetuity. It is managed with a dual mandate to balance the competing demands of current operations and preserve purchasing power to support future operations.

26. Brown's annual endowment payout, or the amount distributed from the endowment to support each fund's designated purpose, is between 4.5% and 5.5% of the endowment value's 12-quarter trailing average, as approved by the Corporation of Brown University, the institution's highest governing body. Because all endowments are legally subject to the Uniform Prudent Management of Institutional Funds ACT (UPMIFA), the University's ability to increase this annual payout beyond the Corporation-approved range is limited. Moreover, the unique funds that make up Brown's endowment are charitable gifts by alumni, parents, students, and friends, and restricted by law and purpose for their designated use.

27. Therefore, if Brown's indirect cost rate is reduced to 15%, Brown will have no feasible opportunity to avoid the consequences outlined in paragraphs 11–23. Implementation of the Guidance will significantly and immediately compromise scientific advancement in numerous areas critical to the public interest, particularly the economy, human health, and science and technology.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 9, 2025, at Providence, Rhode Island.



Greg Hirth

EXHIBIT 6

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASACHUSETTS

COMMONWEALTH OF MASSACHUSETTS, STATE OF CALIFORNIA, [ADDITIONAL STATES]

Plaintiffs,

v.

NATIONAL INSTITUTES OF HEALTH; MATTHEW MEMOLI, M.D., M.S., in his official capacity as Acting Director of the National Institutes of Health; U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES; and DOROTHY FINK, M.D., in her official capacity as Acting Secretary of the U.S. Department of Health and Human Services,

Defendants.

Civil Action No. _____

Declaration of Theresa A. Maldonado

I, Theresa A. Maldonado, hereby declare:

1. I am a resident of the State of California. Since 2020, I have been employed by the University of California (UC), Office of the President, as the systemwide Vice President for Research & Innovation. In addition to my current role, I have a Ph.D. in electrical engineering and over 30 years' academic experience.
2. As the UC system's Vice President for Research & Innovation, I have personal knowledge of the matters set forth below, or have knowledge of the matters based on my review of information and records gathered by UC staff. If called as a witness, I could and would testify competently to the matters set forth below.
3. As Vice President for Research & Innovation, I lead UC researchers and administrators in research policy, funding for systemwide programs, and the innovation and entrepreneurship ecosystem. We work to build UC-wide partnerships, help shape effective policies and provide a strong voice nationally for research and innovation on behalf of UC.
4. As the systemwide leader for research and innovation, I work very closely with the Vice Chancellors for Research from each UC campus, and I am in regular contact with them to identify any issues impacting UC systemwide research, including concerns related to research funding.
5. I am providing this declaration to explain certain impacts of National Institutes of Health ("NIH") Notice Number NOT-OD-25-068, *Supplemental Guidance to the 2024 NIH Grants Policy Statement: Indirect Cost Rates* ("Notice"), which purports to immediately reduce facilities and administrative costs payments (also known as indirect costs) to 15%.

6. The UC system has 10 research-intensive campuses, six academic medical centers, 21 health professional sciences schools, multiple student health centers, and a statewide agriculture research and extension division. UC also manages three affiliated U.S. Department of Energy national laboratories, including the Lawrence Berkeley National Laboratory, the Lawrence Livermore National Laboratory, and the Los Alamos National Laboratory.
7. UC has more than 200,000 employees, making it California's third-largest employer. Its workforce purchases goods and contributes to local economies across the state. UC generates more than $80 billion in economic activity statewide.
8. The University's 21 health professional sciences schools, five NCI-designated cancer centers, and six academic medical centers are widely recognized as among the best in the nation, and they are international leaders in the education of health professionals, in research that develops new cures and treatments, and in public service that provides healthcare for all Californians regardless of ability to pay.
9. UC is one of the nation's leading research institutions, with almost 9% of all U.S. academic research being conducted by UC researchers.
10. Biomedical advancements at UC include the first radiation treatment for cancer, research contributing to the first flu vaccine, the discovery of the role of LDL and HDL cholesterol in heart disease, the invention of modern gene editing, and much more.
11. UC's budget relies on federal funding for its research mission. The research mission at UC includes, but is not limited to, allocated funding for staffing, clinical trials, dissemination of results, public outreach, teaching and training students and others, equipment, and numerous other activities to fulfill the research mission and serve the people of California and the United States.

12. Federal funds are UC's single most important source of support for its research, accounting for more than half of UC's total research awards.

13. In FY 2023, the total amount of federal research awards to UC was over $3 billion.

14. NIH research funding supports the United States' scientific competitiveness worldwide and enables the US to be a global innovation leader. NIH research funding has led to scientific breakthroughs that have improved human health, including new treatments for cancer and diabetes, and declining death rates for heart attack and stroke.

15. Recovering costs of research is essential to maintain the operations of a research university like UC. To perform research that is sponsored by federal agencies, UC incurs a variety of other significant costs that it would not otherwise incur. Facilities and administrative cost rates apply to federally-sponsored research, providing a means of recovering some, but not all, of the costs incurred in the conduct of externally sponsored research that are shared across a large number of projects as well as other functions of the university. They include things such as the maintenance of sophisticated, high-tech laboratories designed for cutting-edge federally sponsored research, secured cyberinfrastructure and data repositories, utilities such as light and heat, telecommunications, hazardous waste disposal, and the infrastructure necessary to comply with a broad range of legal, regulatory, and reporting requirements. These resources not only support the infrastructure and buildings that house pioneering research teams, but also the personnel who assure the safety of adults and children enrolling in clinical trials for cancer and chronic disease, the ethics teams that assure those trials are done safely, and the data and privacy teams that protect research subjects' personal data.

16. In FY 2023, UC received a total of over $2 billion in NIH contract and grant funding. A significant portion of that funding is derived from facilities and administrative cost

reimbursements, which are set at a higher negotiated rate than set forth in the NIH Notice. UC is likely facing a loss of hundreds of millions of dollars annually in facilities and administrative cost recovery as a result of the NIH Notice. The loss of facilities and administrative cost reimbursements, especially at this level, will have an immediate deleterious impact on the success of the research projects and our ability to maintain the same level of staffing critical to support those research projects.

17. Research funding is typically awarded through competitive grants processes, meaning that the annual research budget varies from year to year and is dependent on the success of UC's researchers in these competitions. Federally supported research comes to UC campuses in a combination of both single- and multi-year awards. NIH awards are typically multi-year projects. UC campuses receive and expend hundreds of millions of dollars annually in multi-year awards for their projects, centers, and institutes, and can proceed with establishing budget estimates for planning purposes in reliance on the facilities and administrative cost recovery rates periodically negotiated between individual campuses and the federal government (the Department of Health and Human Services) that set rates for three to five years.

18. NIH promotes medical research, education, training, and practice at UC and other universities through a strategic combination of funding for many individual research projects, as well as support for a few very large, long-term research programs and centers that involve multiple institutions through subawards. Program awards, unlike the thousands of individual investigator awards to UC from NIH, may receive continuous funding for periods of over five years before NIH again opens the program to competitive renewal. Some of these

programs put UC in a grant management role, redistributing NIH's funding through subawards to other institutions nationwide as well as to UC researchers.

19. In developing its annual budget, UC did so with the expectation that it would receive the substantially higher facilities and administrative cost recovery rates that had been negotiated and memorialized in a contract with the Department of Health and Human Services through the designated legal process. The NIH Notice's sudden reduction in anticipated federal funds will cause budgetary and operational chaos that will have an immediate negative impact on the research projects and programs.

20. The NIH Notice creates confusion and uncertainty for UC and the programs we oversee. The reduction in facilities and administrative costs ordered by the NIH Notice will leave gaping holes in the budgets that support the facilities and staff where UC research occurs and will stop us from serving and meeting some of our critical missions, including education, patient care, and research.

21. On an annual basis, the federal government is the largest single sponsor of UC's research enterprise. Because of the cap created by the NIH Notice, many individuals (including faculty, staff, and students), programs, and initiatives receiving federal funding almost certainly would be forced to significantly scale back or halt their research. This outcome will be potentially devastating to the research projects, to the training of new medical personnel, and to the University's research enterprise, regardless of discipline.

22. The reduction of federal funding to the UCs as set forth in the NIH Notice would be devastating for the system. It would result in broad reduction of services, including impact on education, delivery of care to patients, and research.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed this 9th day of February, 2025, in Oakland, California.

Theresa A Maldonado

Theresa A. Maldonado, Ph.D., P.E.
Vice President for Research & Innovation
University of California, Office of the President

EXHIBIT 7

DECLARATION OF DAVID A. TIRRELL

I, David A. Tirrell, declare as follows:

1. I am the provost at the California Institute of Technology (Caltech) in Pasadena, CA. I have held that position since October 1, 2017. I have held an appointment as Professor of Chemistry and Chemical Engineering at Caltech since July 1, 1998. I previously held professorial appointments at Carnegie Mellon University and at the University of Massachusetts at Amherst.

2. As provost, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Caltech personnel, and could testify thereto.

3. Caltech receives substantial annual funding from the National Institutes of Health ("NIH"). In fiscal year 2024, we expended $78,989,843 in conducting research supported by NIH. Of this total, $54,869,817 were expended as direct costs, $24,120,026 as indirect costs. We have 175 active NIH awards and subawards.

4. The funding Caltech receives from NIH supports critically important medical research, which millions of Americans benefit from and depend on. For example:

   a. Caltech research in immunology and neurobiology is advancing the development of reliable biomarkers for neurodevelopmental disorders including autism spectrum disorder and schizophrenia.

   b. Caltech research in structural biology is providing strategies for engineering of therapeutic antibodies for treatment of viral infection, including by the virus that causes Covid-19 and related diseases.

   c. Caltech research in medical engineering has yielded photoacoustic microscopy methods that allow pathologists to identify cancerous features and enable

accurate definition of tumor margins to guide surgical resection of bone tumors without exposure to radiation.

5. Indirect costs are essential for supporting this research. The NIH's proposal to cut indirect cost rates to 15% would jeopardize all of the research projects described in paragraph 4.

6. Indirect costs include those incurred in the construction and maintenance of state-of-the-art facilities for advanced research, as well as the procurement and maintenance of the equipment necessary to conduct such research. Without this equipment, we cannot conduct the research.

7. For example, with respect to the areas of research described in Paragraph 4:

a. The NIH-supported research described in Paragraph 4a is conducted in the Chen Institute for Neuroscience on the Caltech campus. Construction of the Chen Neuroscience Research Building was completed in 2020 at a cost of more than $200,000,000. Indirect cost recovery is an essential element of the financing of the building.

b. The NIH-supported research described in Paragraph 4b is carried out in the Caltech Center for Cryo-Electron Microscopy, a state-of-the-art facility that was recently renovated to enable the installation and operation of high-quality instrumentation for biomedical imaging. Indirect cost recovery is critically important to the renovation, operation and maintenance of this facility.

c. The NIH-supported research described in Paragraph 4c is performed in the W. M. Keck Engineering Laboratories, which were opened in 1960. Extensive renovation of the Keck building was required to create the Caltech Optical

Imaging Laboratory in 2017. Indirect cost recovery was essential to the construction and outfitting of the laboratory.

8. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a large number of regulatory mandates from agencies such as NIH.[1] These mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

9. Recovery of Caltech's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

10. In fiscal year 2024, the predetermined indirect cost rate is 70% of modified total direct costs. The amount of indirect cost recovered during the year reflects rates negotiated over several years, owing to the multi-year character of NIH awards.

11. The impact of a reduction in the indirect cost rate would cause substantial harm to the Caltech research enterprise. As noted in Paragraph 3, of the $78,989,843 in NIH funds expended in fiscal year 2024, $54,869,817 were expended as direct costs, $24,120,026 as indirect costs. We expect our expenditures in fiscal year 2025 to be similar. If—contrary to what Caltech has negotiated with the federal government—the indirect cost rate is reduced to 15%, Caltech's anticipated annual indirect cost recovery would be reduced by approximately $16,000,000, to roughly $8,000,000.

[1] https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf

12. This reduction will have deeply damaging effects on Caltech's ability to conduct research from day one. For example:

a. Caltech is currently making decisions regarding admission of graduate students who conduct much of our NIH-supported research. The number of graduate students – who are the future of biomedical research – who can be admitted will have to be reduced substantially. The impact on the future of research will be immediate and unrecoverable.

b. Offers to new postdoctoral scholars also will be reduced, with similar impact on the quality of the research environment and on the future of biomedical research.

c. Support for our shared biomedical research facilities will have to be reduced immediately. The viability of these facilities will be compromised.

13. Caltech is in the process of submitting 11 applications for NIH research support. The uncertainty regarding NIH indirect cost policy makes it impossible to complete submission of these applications, which are intended to support research related to nicotine addiction, congenital birth defects, aging, neuromodulation, Parkinson's disease, and biomedical measurement technologies.

14. Caltech has for decades relied on the payment of indirect costs. Until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on estimates of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. Furthermore,

Caltech has long-term obligations—for example, the financing of already-constructed research facilities such as the Chen Neuroscience Research Building—and it relies on budgeted indirect cost recovery to fulfill these commitments.

15. In addition to the immediate impacts described above, there are longer term impacts that are both cumulative and cascading. Perhaps most harmful is the contraction in Caltech's ability to train the biomedical researchers of the future, which will compound from year to year if the proposed reduction in indirect cost recovery is implemented.

16. A slowing of research at Caltech and other American universities will allow competitor nations that are maintaining their investments to surpass the United States on this front, threatening both our Nation's national security and its economic dominance.

17. Nor can Caltech cover the funding gap itself. While Caltech maintains an endowment, it is neither feasible nor sustainable for Caltech to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

a. The majority of Caltech's endowment is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. Caltech is not legally permitted to use those funds to cover research infrastructure costs.

b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically around 5%, to ensure long-term financial stability for the institution.

c. As a non-profit institution, Caltech applies all of its revenue to mission-critical activities, leaving little margin to absorb unexpected funding gaps. Unlike for-profit organizations, Caltech does not generate significant surpluses that could

be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

18. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on Caltech—which would in turn force reductions in key investments supporting Caltech's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain Caltech's academic excellence and its ability to perform research in the national interest.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 9, 2025, at Pasadena, CA.

David A. Tirrell

EXHIBIT 8

DECLARATION OF THERESA S. MAYER

I, Theresa S. Mayer, declare as follows:

1. I am the Vice President for Research at Carnegie Mellon University ("CMU") in Pittsburgh, Pennsylvania. I have held that position since February 1, 2023.

2. As Vice President for Research, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by CMU personnel, and could testify thereto.

3. CMU receives substantial annual funding from the National Institutes of Health ("NIH"). CMU has 189 active research awards from NIH, totaling $136.9 million in funding. Total research expenditures for fiscal year 2024 were $52 million, which included $11.7 million in indirect costs.

4. The interdisciplinary teams supported by NIH funding benefit the nation by bringing together the expertise of computer scientists, engineers, biologists, chemists and others to develop innovative solutions. The funding CMU receives from NIH supports critical and cutting-edge medical research, which millions of Americans will be able to benefit from and depend on. For example:

   a. CMU researchers are working on restoring sight to patients with corneal blindness. Researchers are fabricating corneas in the laboratory that can be used to overcome the shortage of corneas from tissue donation.

   b. CMU researchers are developing new methods to keep artificial lungs from clotting and failing. This research will enable safer support of patients with short-term lung failure from diseases like pneumonia, and create new, restorative treatments for patients dying from chronic lung diseases.

c. CMU researchers are developing more long-lasting and effective methods for stimulating deep areas in the brain to relieve symptoms of Parkinson's disease. This work promises to enable more fluid and natural motion in those suffering from the disease, based on a deep understanding of the specific neurons impacted by the disease.

d. CMU researchers are developing a novel method for helping patients with long-term paralysis on one side of the body due to stroke. By stimulating the spinal cord, this new approach promises to help stroke sufferers recover control of their arm and hand by strengthening pathways damaged by stroke.

e. A large-scale study of families with a history of autism spectrum disorder ("ASD") is identifying genetic factors associated with core features of ASD. Uncovering these genetic factors holds promise for development of targeted therapies that address underlying causes of ASD, which could improve social communication and language skills, increasing independence and improving the quality of life for individuals with ASD.

f. A study of patients undergoing removal of brain tumors is providing insight into how the brain relearns function. By comparing functionality prior to and following tumor removal, this work promises to improve outcomes in individuals undergoing invasive brain surgery.

g. CMU researchers are developing methods to more effectively treat epilepsy, replacing invasive brain surgery with a noninvasive method to identify where in the brain disease is present. Measurements from the surface of the scalp are interpreted

with cutting-edge data science and machine learning techniques to predict disease location, improving clinical management of focal drug-resistant epilepsy.

h. Researchers at CMU are creating multiple large-scale databases to document speech and behavior in various neurological diseases, including dementia, aphasia (inability to find words, speak, read, or write), dysfluency, and other disorders that affect communication. These multimedia data sets provide an open source for researchers and clinicians throughout the United States who study how to diagnose and treat communication disorders.

i. A novel interface is being developed at CMU to enable paralyzed individuals who cannot speak or use their upper limbs to use brain signals to communicate through technology interfaces (e.g., driving speech synthesizers, writing email, etc.). The novel "stentrode" picks up signals in the brain that would, in a healthy individual, normally control the hand (to type) or the mouth (to speak), enabling these individuals to communicate, rather than being "locked in" due to their disability.

5. Indirect costs are essential for supporting this research. The NIH's proposal to cut indirect cost rates to 15% would end or seriously jeopardize all of the research projects described in paragraph 4.

6. Indirect costs include high-tech lab structures, equipment and maintenance, security and data storage, operations maintenance and utilities supporting research labs and facilities, and constructing and maintaining state-of-the-art facilities required to meet the current technical requirements of advanced research. Without this equipment and facilities, we cannot conduct the research.

7. For example, with respect to the areas of research described in Paragraph 4:

a. Artificial lung and biofabricated cornea research require microscopes capable of identifying, differentiating, and imaging specific molecules and cells present on the gas exchange surfaces of artificial lungs and within the corneas;

b. Artificial lung research requires spectrophotometers that detect the presence of specific molecules causing coagulation and inflammation in blood;

c. Artificial lung and biofabricated cornea research require equipment to sterilize various research items, both at high temperatures for durable items or at low temperatures, and gaseous sterilization for devices constructed of medical plastics;

d. Biofabricated cornea research requires tissue culture facilities that contain biosafety cabinets that ensure a safe, sterile work environment and incubators to grow the cellular component of tissues;

e. Artificial lung and biofabricated cornea research require centrifuges for separating different fluids, cells, and sub-cellular components for further analysis or research processes;

f. Artificial lung and biofabricated cornea research require -80º C refrigeration and cold-rooms for biological samples;

g. Custom-fabricated, highly precise 3D bioprinting systems are required for tissue and organ engineering work;

h. Confocal microscopes, cell incubators, biocabinets, plate readers, IVIS and other fluorescent imaging systems, environmental Scanning Electron Microscopes, and metrology equipment are used for benchtop and in vitro tissue and organ engineering studies;

i. Microfabrication equipment (such as laser milling systems, precise 3D printers, centrifuges, vacuum chambers, etc.), nanofab (cleanroom), and materials characterization systems (and laboratory in general) are all used to support biosciences and bioengineering research;

j. Studies that document how the brain recovers from tumor removal and other projects investigating human neural processing rely on a central functional magnetic resonance imaging center dedicated to research (rather than clinical) applications, housed within Carnegie Mellon University. This facility (the BRIDGE Center) is currently operating at over 100% capacity, supporting the research of faculty from across the university;

k. Large-scale computational resources are critical for application of machine learning to neuroscience data, including analysis of noninvasive measures used to predict where epileptic seizures arise in the brain;

l. Data storage facilities and associated staff are critical for projects that require large-scale data storage, including studies that document communication disorders (aphasia, dementia, and other issues) and make the data available to researchers and clinicians outside of CMU;

m. Studies of novel technology interfaces that enable human stroke patients and those with paralysis to control devices critically rely on shared facilities to build custom mechanical and electrical devices;

n. Studies of human participants suffering from stroke, paralysis, dementia, aphasia, dysfluency, autism spectrum disorder, brain tumors, and epilepsy require extensive

administrative support to ensure that all studies are conducted ethically, legally, and with minimal risk that is justified by the potential benefit to human health; and

o. Studies involving animal models of Parkinson's disease, autism spectrum disorder, and other forms of neural dysfunction require extensive administrative support and specialized, centralized facilities.

8. Physical space costs are one of the largest components of indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research that can be done at CMU. The Richard K Mellon Hall of Sciences, now under construction, is a new facility which will house key departments from the Mellon College of Science (Biological Sciences, Chemistry) and from the School of Computer Science (Language Technologies and Machine Learning, Computational Biology), to build on and expand the interdisciplinary research for which Carnegie Mellon is well known. Although the university has raised significant private support for this new facility, the budget also depends in part on long term expected indirect cost recovery from all sponsored funding.

9. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH. These mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

10. Recovery of CMU's indirect costs is based on fixed with carryforward rates that have been contractually negotiated with the federal government.

11. Through fiscal year 2025, CMU's on-campus, fixed with carryforward indirect cost rate is 51.8%.

12. The impact of a reduction in the indirect cost rate would be devastating to the work described above. Of the $52 million in NIH research expenditures in fiscal year 2024, approximately $28.2 million was allocated for direct costs, $12.1 million for subcontracts (which are not eligible for overhead recovery), and $11.7 million for indirect costs. Similarly, in fiscal year 2025, CMU expects to receive $54 million in NIH funding for direct costs, while $12.2 million would be allocated for indirect costs. And over the next five years, CMU anticipates receiving an average of $57 million from the NIH for annual direct costs. Based on the fixed with carryforward indirect cost rate of 51.8%, which was agreed upon by the federal government as of July 29, 2024, the University thus expects to receive indirect cost recovery consistent with the expected average funding and prior years.

13. If—contrary to what CMU has negotiated with the federal government—the indirect cost rate is reduced to 15%, that would reduce the University's anticipated annual indirect cost recovery by 71%. Therefore, in fiscal year 2024 the loss of indirect cost recovery would be approximately $8.3 million.

14. This reduction will have deeply damaging effects on CMU's ability to conduct research from day one. Most critically, it will necessarily and immediately result in staffing reductions. For example, as indicated above, indirect cost recovery is used to support the salaries of research administrators who play a crucial role in the research ecosystem. They support the administrative and financial aspects of research grants, in addition to supporting compliance with

regulations governing such things as human subjects, animal research, biosafety, data privacy, and security. Without appropriate funding for indirect costs, the University would have to reduce this staffing which would immediately and negatively impact CMU's ability to support critical research projects.

15. CMU has for decades relied on the payment of indirect costs. Until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. In some cases, CMU has long-term obligations—for example, tenured faculty, salaries, space lease, capital renewal, service contracts, software licensing costs and admitted PhD students—and it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments.

16. Disruptions to CMU's research will also have negative effects in the Pittsburgh area, the state of Pennsylvania, and the broader region. CMU is one of the largest employers in Pennsylvania, with 5,979 employees at its Pittsburgh campus alone. CMU engages in important collaborations with state and local partners to help solve regional challenges through joint research and innovation. CMU's research also drives discoveries that launch new ventures, attract private investment, and make a positive social impact by supporting the commercialization of novel technologies. As such, CMU plays a crucial role in catalyzing regional and national economic development. These startups drive economic activity, create high-skilled jobs, and contribute to the growing innovation ecosystem. The reduction in CMU's research budget would immediately and seriously jeopardize these economic contributions.

17. CMU's researchers are at the forefront of AI research, pioneering technologies that are transforming health care and the life sciences. Slowing down or halting the research conducted by CMU and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance.

18. CMU cannot cover the funding gap itself that would result from the reduction of the indirect cost rate. While CMU maintains an endowment, it is neither feasible nor sustainable for CMU funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

a. The majority of CMU's endowment—around 83.8%—is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. CMU is not legally permitted to use those funds to cover research infrastructure costs.

b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically around 5%, to ensure long-term financial stability for the institution.

c. As a non-profit institution, CMU reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, CMU does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

19. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on CMU—which would in turn force reductions in key

investments supporting CMU's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain CMU's academic excellence. This change to the indirect rate will undermine CMU's ability to advance its mission to educate the next generation and create knowledge that benefits society as a whole.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025 at 5000 Forbes Avenue, Pittsburgh, Pennsylvania, 15213.

/s/ Theresa S. Mayer

Theresa S. Mayer

EXHIBIT 9

DECLARATION OF CASE WESTERN RESERVE UNIVERSITY

I, J. Michael Oakes, declare as follows:

1. I am the Senior Vice President for Research and Technology Management at Case Western Reserve University ("CWRU") in Cleveland, Ohio. I have held that position since 2021. I earned my PhD in Social Epidemiology from the University of Massachusetts Amherst in 1997.

2. As SVP for Research and Technology Management, I have personal knowledge of the contents of this declaration or have knowledge of the matters based on my review of information and records gathered by CWRU personnel and could testify thereto.

3. CWRU receives substantial annual funding from the National Institutes of Health ("NIH"). For CWRU's 2022-23 fiscal year, we received approximately $246 million from the NIH in grants. Of that amount, approximately $84 million was for indirect costs.

4. The funding that CWRU receives from NIH supports critical and cutting-edge medical research, which millions of Americans benefit from and depend on. For example:

   a. Our Case Comprehensive Cancer Center, an NCI designated Cancer Center, supports research for cancer treatment and cancer cures.

   b. Our medical research also includes work towards Alzheimer's treatments and searches for a cure, as well as for numerous pediatric diseases.

   c. This research is often conducted in collaboration with and through our affiliate hospitals.

   d. Additional areas of research supported by NIH include regenerative medicine, restoring movement following paralysis, and improving mental health, among others. Further, there are hundreds of PhD students at the CWRU School of Medicine and the vast majority are supported by NIH in one way or another.

5. Indirect costs are essential for supporting this research. The NIH imposed cut and cap of indirect cost rates to 15% would seriously jeopardize all of the research projects described in paragraph 4 plus many others.

6. Indirect costs help fund the construction of new facilities for interdisciplinary research as well as the research equipment for our Comprehensive Cancer Center. Without these new facilities and new equipment, we cannot conduct this research.

7. Physical space costs are one of the largest components of indirect costs, and the amount and quality of space available to researchers has a direct and obvious impact on the amount of research that can be done at CWRU. We are currently in the process of constructing a $300 million interdisciplinary research facility at CWRU. Indirect cost recovery from NIH grants will help maintain this important facility.

8. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH. These mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; protecting intellectual property, technologies; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

9. Recovery of CWRU's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

10. Through fiscal year 2024, the predetermined indirect cost rate for NIH awards is 61%.

11. If—contrary to what CWRU has negotiated with the federal government—the indirect cost rate is reduced to 15%, that would reduce the University's anticipated annual indirect cost recovery by a total of approximately $65 million on an annual basis.

12. CWRU has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. These negotiated rates are also audited annually by the federal agencies. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, faculty hires, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. A cut in the indirect cost recovery rate greatly inhibits the ability to meet these obligations that have been incurred in reliance on the indirect costs.

13. In addition to the immediate impacts and reliance interests described above, there are longer term impacts that are both cumulative and cascading. Significantly, CWRU's ability to conduct groundbreaking medical research that saves patients' lives will be severely diminished.

14. Disruptions to CWRU's research will also have negative effects in the City of Cleveland, the State of Ohio, and the broader region. Thousands of residents are directly employed by CWRU—and it collaborates with state and local partners to help solve regional challenges through joint research and innovation. CWRU's research also fuels spending in the regional economy, including by driving discoveries that launch new ventures, attract private investment, and make a positive social impact. A massive reduction in CWRU's research budget would immediately and seriously jeopardize these contributions to the local region.

15. Finally, slowdowns or halts in research by CWRU and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance.

16. Nor can CWRU cover the funding gap itself. It is neither feasible nor sustainable for CWRU to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery. Indeed, even with a 61% indirect cost recovery rate, CWRU does not recover between 10% to 20% of its actual research costs (i.e., this is a cost share borne by CWRU). Absorbing the difference between our negotiated cost recovery rate and 15% would require the serious research cuts discussed above.

17. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on CWRU—which would in turn force reductions in key investments supporting CWRU's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain CWRU's academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 9th of February, 2025, at Cleveland, Ohio.

/s/ J. Michael Oakes
J. Michael Oakes

EXHIBIT 10

DECLARATION OF ANNE R. SULLIVAN

I, Anne R. Sullivan, declare as follows:

1. I am the Executive Vice President for Finance at Columbia University ("Columbia") in New York, NY. I have held that position since 2007.

2. As Executive Vice President for Finance, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Columbia personnel, and could testify thereto.

3. Columbia receives substantial annual funding from the National Institutes of Health ("NIH"). Columbia is the prime award recipient of approximately 1,480 currently active NIH grant awards, and also is the sub-recipient[1] of approximately 750 awards, for a total of approximately 2,230 active awards, as of the date of this declaration.

4. In our last fiscal year, Columbia's reimbursement for direct expenses from NIH was approximately $565 million, with approximately $500 million incurred on prime awards and approximately $65 million as a subrecipient, for total direct cost reimbursement from NIH of approximately $565 million. This was 60% of Columbia's total federally sponsored direct grant revenue in fiscal year 2024.

5. The funds provided by NIH in fiscal year 2024 to support indirect costs, such as facilities and administration of these awards, was approximately $240 million. This was 69% of the total federally sponsored indirect cost recovery received by Columbia in fiscal year 2024. The slightly higher proportion of indirect cost recovery funded by NIH (relative to direct grant activity) reflects a number of factors, including the amount of NIH funded work performed on-campus and directly by Columbia versus sub-awardees.

[1] As a sub-recipient, Columbia researchers provide critical contributions to projects that are managed by other institutions with funding from NIH.

6. The funding Columbia receives from NIH supports critical and cutting-edge medical research, which millions of Americans benefit from and depend on. For example:

a. Columbia's cancer research includes developing immunosuppressive therapies to combat inoperable pancreatic cancer. This research has already shown great success in clinical trials—significantly shrinking the tumors of patients for whom surgery had been unsuccessful—and has the potential to significantly extend the lifespan of those diagnosed with the disease.

b. Columbia's infectious disease research includes characterizing emerging viral threats, creating new diagnostic methods, and developing new therapeutics, including vaccine and antibody strategies. Recent work includes research on H7N9, a highly pathogenic avian influenza with pandemic potential that has already caused significant disruptions to America's food supply.

c. Columbia's research on Alzheimer's Disease includes exploring the possibility of new treatments to address aging-related cognitive decline and Alzheimer's by leveraging genetic and pharmacological targeting of adult neurogenesis in combination with cutting-edge physiological recordings and computational simulation.

d. Columbia's orthopedic research includes developing a biological knee implant with biodegradable scaffolding that will last indefinitely, obviating the need for multiple knee replacements and improving the quality of life of knee replacement patients.

7. Indirect cost recoveries are essential for supporting this research. The NIH's proposal to cut indirect cost reimbursement rates to 15% would seriously jeopardize all of the research projects described in paragraph 6.

8. Indirect cost recovery rates include funding to provide and maintain adequate space and equipment for research, support functions for ensuring federal research compliance, safety, and necessary controls for ensuring proper human subject and animal experiments. Without funding to cover these indirect costs, Columbia scientists cannot conduct their research.

9. This reduction will have deeply damaging effects on Columbia's ability to conduct research from day one. Most critically, it will necessarily and immediately result in staffing reductions, impede ability to purchase equipment critical for research, and interfere with the University's ability to support the complex needs of its research community.

10. Specifically, indirect cost recovery funds the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH.[2] These mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data. As an immediate response to implementation of the flat 15% indirect cost recovery rate, Columbia would be forced to lay off employees and suspend non-personnel spending associated with these vital research-supporting activities.

11. Recovery of Columbia's indirect costs is based on a predetermined rate that has been contractually negotiated with the federal government.

12. The current, negotiated indirect cost recovery rate for Columbia research performed on campus is 64.5%.[3] This includes a capped component for administrative support of

[2] https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf
[3] Lamont-Doherty Earth Observatory, located on a separate campus, has a separately negotiated rate.

26%, which does not fully cover the administrative support costs for research. For Columbia, the indirect recovery rate also includes a negotiated amount of 19.7% for operations and maintenance, which contributes to the cost of maintaining space including the safety, cleanliness, security, and basic operating repairs specifically for research space. With regard to supporting the University's fixed costs for space that has been allocated to support federal research, the indirect cost recovery rate also includes 16% that reimburses Columbia for capital investment in buildings and equipment dedicated to research.

13. The impact of a reduction in the indirect cost rate would be devastating. If—contrary to what Columbia has negotiated with the federal government—the indirect cost rate is reduced to 15%, that would reduce the University's anticipated annual indirect cost recovery by approximately $180 million.

14. Columbia has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our multi-year budgeting and planning. Researchers utilize NIH funds to conduct hiring of personnel and plan space needs over a multi-year period. Their annual budgets rely on the negotiated rate for indirect cost recovery. A sudden reduction of the indirect cost recovery rate for these multi-year projects would upend these budgets and planned research, and the allocation of significant space to federally-funded research.

15. Finally, slowdowns or halts in research by Columbia and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance.

16. Nor can Columbia cover the funding gap itself. Columbia already subsidizes the cost of NIH-funded research from a combination of philanthropy and revenues generated from

patient care and education activities. These funding sources are nowhere near sufficient to cover the full indirect cost of this research. And, while Columbia maintains an endowment, it is neither feasible nor sustainable for Columbia to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

a. The majority of Columbia's endowment—approximately 80%—is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. Columbia is not legally permitted to use many of these funds to cover research infrastructure costs.

b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically around 5%, to ensure long-term financial stability for the institution.

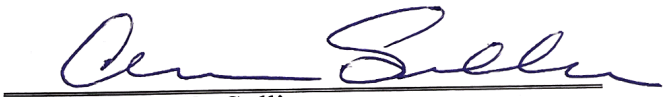
c. Columbia is also subject to New York Prudent Management of Institutional Funds Act which creates a presumption of imprudence for appropriations in excess of 7% of an individual endowment fund's market value. N-PCL § 553(d)(1), (2).

d. As a non-profit institution, Columbia reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. Operating surpluses that are not restricted to donor purpose are invested in capital, including state-of-good repair investments for campus infrastructure, and housing for students and faculty. In other words, unlike for-profit organizations, Columbia does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

17. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on Columbia—which would in turn force reductions in key investments supporting Columbia's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain Columbia's academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025, at New York, NY.



Anne R. Sullivan

EXHIBIT 11

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, ET AL.,

Plaintiffs,

v.

DEPARTMENT OF HEALTH & HUMAN SERVICES,
200 Independence Ave, S.W.
Washington, D.C. 20201

NATIONAL INSTITUTES OF HEALTH,
9000 Rockville Pike
Bethesda, MD 20892

DOROTHY A. FINK, M.D. in her official capacity as Acting Secretary, Department of Health and Human Services
200 Independence Ave, S.W.
Washington, D.C. 20201

and

MATTHEW J. MEMOLI, M.D., M.S. in his official capacity as Acting Director, National Institutes of Health
9000 Rockville Pike
Bethesda, MD 20892,

Defendants.

Case No.

DECLARATION OF ROBERT A. HARRINGTON, M.D.

I, Robert A. Harrington, M.D., declare as follows:

1. I am the Stephen and Suzanne Weiss Dean of Weill Cornell Medicine and Provost for Medical Affairs of Cornell University ("Cornell" or the "University"). I assumed this position on September 12, 2023. I am a cardiologist, past president of the American Heart Association, and

the author of more than 760 peer-reviewed manuscripts, reviews, book chapters, and editorials. I make this declaration in support of the Plaintiffs' Complaint in this matter and the forthcoming Emergency Motion for a Temporary Restraining Order.

2. I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Cornell personnel, and could testify thereto.

3. In my role, I am the chief academic officer with oversight of the clinical and educational missions of Weill Cornell Medical College and the Graduate School of Medical Sciences in New York, New York (together, "Weill Cornell Medicine"). Weill Cornell Medicine carries out a wide variety of bench-to-bedside research, including on cancer, cardiovascular disease, metabolic diseases, neurodegenerative diseases, diseases affecting children, and infectious diseases.

4. The federal government has selected Cornell to conduct a wide variety of vital research on behalf of United States citizens, funded in part by agency awards from across the federal government, including but not limited to the Department of Health and Human Services ("HHS") and its National Institutes of Health ("NIH"). For Cornell's fiscal year 2024 (July 1, 2023 to June 30, 2024), Cornell expended approximately $452 million on 1,693 awards from NIH. On those grants, the University's indirect cost rate was as published and negotiated with the federal government, allowing Cornell to recover $137 million in reimbursement for those costs from NIH. For Cornell's fiscal year 2025 (July 1, 2024 to June 30, 2025), Cornell holds 1,207 awards from NIH. The NIH awards cover activities across Cornell's different locations, including at its primary campus in Ithaca, New York and Weill Cornell Medicine.

5. Cornell's work in fundamental research on sponsored awards issued by NIH targets important health issues, saves and improves lives, and adds immeasurably to our economy. NIH awards are typically issued for a five-year term, and are often extended for an additional five-year term. Indeed, some NIH sponsored activities continue for decades. Examples of just a handful of the awards that NIH has selected Cornell to perform work on include research on:

a. Advanced cancer research, including efforts to understand cancer biology, genetics, and epigenetics to develop novel, personalized treatments, especially for aggressive forms of cancer;

b. Analyzing how immune cells are guided through the body, to aid design of therapies for not only cancer but autoimmune diseases and fibrosis;

c. The development of new imaging and biomarker strategies to improve early diagnosis and treatment outcomes for neurological conditions and neuroimmune conditions such as chronic fatigue syndrome;

d. Advanced cardiac imaging and regenerative medicine approaches;

e. Understanding and addressing fertility challenges in women and men;

f. Investigations into childhood diseases that aim to reduce infant mortality, improve outcomes for pediatric cancers, enhance treatments for genetic disorders, and optimize pain management in critically ill children;

g. The development of portable point-of-care diagnostics for nutrition, infection, and cancer; and

h. Research into regenerative medicine and aging, including analyzing cellular stress responses to find new pathways for treating age-related diseases and improving quality of life in older adults.

6. At Cornell, research funded by the NIH has a direct impact on public health. Funded studies lead to the development of new treatments, cures, diagnostics, and public health interventions. Those studies inform public health policies and improve quality of life for millions of people and also maintain health quality in animals that are integral to the United States food system. In addition, one of the reasons patients seek out Weill Cornell Medicine is because of the presence of physicians at the cutting edge in their fields, in part due to their work on sponsored activities. This allows the patients to receive access to the latest treatments and techniques.

7. On a typical grant, the funding amounts must cover both direct costs (expenses directly related to the specific grant activity) and indirect costs. Indirect costs cover essential expenses such as facilities, utilities, financial administration, and operations that enable research to flourish safely and responsibly, such as research compliance and safety programs, human and animal research protections, and hazardous waste disposal. *See* Office of Management and Budget ("OMB") Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 C.F.R. §§ 200, *et seq.* (the "Uniform Guidance"). Particularly in biomedical research, the specialized laboratory facilities, the need to adhere to specific government regulations for animal welfare and human subject safety in research, and required processes to maintain responsible research mean that these indirect costs are considerable. Historically, the federal government has used a narrower definition of direct costs than is typical in foundation-funded research, mostly to streamline budgeting and minimize administrative burdens on the agencies. Significantly reducing the allowable indirect cost percentage without altering the way in which costs are classified as direct or indirect significantly disrupts the financial model that has supported needed research and innovation across the United States for decades.

8. In addition, as required by the Uniform Guidance, Cornell has negotiated an indirect cost rate with the federal government of up to 64% for its Ithaca campus and 69.5% at Weill Cornell Medicine. The higher negotiated rate for Weill Cornell Medicine reflects the generally higher costs of operating a research enterprise in a large, urban area with an associated higher cost of living.

9. Although the federal government's portion of funds needed for university research has been declining over time, indirect cost reimbursements are vital to the operation of the nation's federal research system, which includes the sponsored activities conducted at Cornell. Direct costs on NIH awards simply fall well short of covering the real, comprehensive cost of sponsored activities including research, and do not reflect the full facilities and administration costs that Cornell must incur in order to be able to perform the work. This is particularly the case for NIH-sponsored activities in biomedical research that include animal welfare and human subjects considerations, and safe use of biological and chemical agents by researchers.

10. As noted above, for Cornell's fiscal year 2024 (July 1, 2023 to June 30, 2024), Cornell expended approximately $452 million on 1,693 awards from NIH. On those grants, Cornell recovered $137 million in reimbursement for indirect costs from NIH. Accordingly, the reimbursement of these indirect and vital costs for safe and responsible NIH-sponsored activities represented only 30% of the total cost of those NIH-sponsored activities. Cornell's ability to conduct NIH-sponsored research during its fiscal year 2025 (July 1, 2024 to June 30, 2025) under its 1,207 awards from NIH would be irreparably harmed by an immediate reduction in the committed indirect cost reimbursement by NIH, estimated as a shortfall of over $42,000,000 over the remainder of this one fiscal year alone.

11. On February 7, 2025, NIH issued Notice NOT-OD-25-068, "Supplemental Guidance to the 2024 NIH Grants Policy Statement: Indirect Cost Rates" ("NIH Supplemental Guidance"). The NIH Supplemental Guidance provides that effective February 10, 2025, indirect costs allowed on all future awards and going-forward expenses for all existing awards shall be limited to fifteen percent.

12. If NIH's Supplemental Guidance is permitted to remain in effect, it will irreparably harm research at Cornell that directly benefits public health and American competitiveness. Such a drastic decrease in allowable indirect costs on three days' notice—especially with regard to currently funded awards on which sponsored research activities are in process and for indirect costs that Cornell has already budgeted for in its current fiscal year—will immediately impair the University's ability to conduct sponsored research in compliance with the underlying award agreements and applicable laws regarding research safety and human and animal research protocol compliance.

13. For example, without continuing indirect cost reimbursement at Cornell's negotiated rates, Cornell would no longer be able to carry out all of the sponsored activities and properly maintain the facilities and equipment currently in use. The University does not have sufficient budgeted operational funds to cover a sudden structural decrease in indirect cost recovery for existing awards on an ongoing basis, and would be required to consider layoffs, both for research staff and research administration officers and other employees of the university who perform critical but indirect work in support of sponsored activity (such as custodians, security guards, and so forth), and reductions in administrative costs necessary for research services. This harm is not limited to monetary damages that can be rectified with a compensatory award. For example, even if the indirect cost rate is increased at a later date, if a research facility must be

closed in the interim because its operation and maintenance can no longer be supported, Cornell will immediately lose its investment in that infrastructure and have a diminished ability to undertake that research in the future, even if the NIH Supplemental Guidance were rescinded or invalidated. This change could also impact patients currently enrolled in federally funded clinical trials, who may find their treatment discontinued, leading to potential health risks. Further, Cornell may no longer have the key personnel or materials needed to restart or carry out certain sponsored activities.

14. Cornell necessarily relies on both the direct cost and the indirect cost portions of funding provided with each specific NIH award in formulating its overall operating budget in any given year. Operating budgets rely upon estimates of direct and indirect sponsored funding to plan for annual staffing needs, infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), facility building and renovation, and equipment purchases to support a broad range of overlapping research activities.

15. The harmful impact of the NIH Supplemental Guidance is not limited to Cornell and its employees. For example, the University is by far the largest employer in Tompkins County, New York. If the lower indirect cost reimbursement rate requires layoffs, that loss of employment will be harmful not only to the affected employees and their families, but to the overall economic stability of the County as a whole. The University may have to reduce the quantity of equipment and labor used to maintain its facilities, lowering the economic activity of the County and impairing the funding that flows to essential local government services arising out of that activity.

16. In addition, the NIH Supplemental Guidance will undermine the feasibility of sponsored activity that results in medical and scientific breakthroughs that provide significant social and economic value to the country, sometimes opening up entirely new areas of commercial

development. The United States is a stronger, more secure, and more economically vibrant country as a result of the collective benefits arising from federally sponsored research. Additionally, the next generation of scientists, physicians, engineers, and other skilled workers develop their vitally important expertise while learning and working at research institutions such as Cornell. The NIH Supplemental Guidance would drastically reduce the positive impact of this work and the pipeline of educated professionals that United States industry requires to be internationally competitive. Slowdowns or halts in research by Cornell and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening our nation's national security and its economic dominance.

17. Temporary injunctive relief is vital to protect against these devastating consequences. Even if the NIH Supplemental Guidance is ultimately rescinded or held invalid, Cornell does not have the ability to cover such a radical reduction in indirect cost reimbursement during the course of protracted litigation. Cornell's existing endowment cannot simply be redirected to pick up these losses. The vast majority of endowed funds are restricted by the terms on which the funds were donated to the University and cannot legally be used to cover research infrastructure costs. Moreover, Cornell may only draw down the portion of the endowment that is unrestricted at a rate that complies with New York State law.

18. As a non-profit institution, Cornell reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, Cornell does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

19. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on Cornell—which would in turn force reductions in key investments supporting Cornell's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain Cornell's academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: New York, New York
February 9, 2025

R. Harrington MD

ROBERT A. HARRINGTON, M.D.

EXHIBIT 12

DECLARATION OF DR. DAVID F. KOTZ

I, David F. Kotz, declare as follows:

1. I am the Provost at Dartmouth College ("Dartmouth") in Hanover, New Hampshire. I have held that position since 2021. I am also the Pat and John Rosenwald Professor of Computer Science, and a researcher who has held funding from several federal agencies, including the National Institutes of Health ("NIH"). I have been on the faculty at Dartmouth since 1991, and I make this declaration in support of Plaintiffs' Complaint and Motion for a Temporary Restraining Order.

2. As Provost, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Dartmouth personnel (including in the Office of Sponsored Projects), and could testify thereto.

3. Dartmouth is a nationally recognized research institution and has "R1" status on the Carnegie Classification of Institutions of Higher Education, which indicates "very high research activity" and recognizes Dartmouth's significant contribution to advancing scientific discoveries that have tangibly benefitted the population of the US and the World.[1]

4. In fiscal year 2024, Dartmouth received over $178 million in external research funding, of which $137 million was awarded by the federal government. Over $97 million of that federal funding was awarded specifically by the NIH.

5. Dartmouth's Geisel School of Medicine ("Geisel") is the only medical school in the State of New Hampshire. Geisel, its primary clinical affiliate Dartmouth Health, and the

[1] https://carnegieclassifications.acenet.edu/institution/dartmouth-college/

White River Junction VA Medical Center together form the Dartmouth-Hitchcock Medical Center, which houses the only Level 1 Trauma Center between Burlington, VT, Portland, ME, and the Boston area.

6. The federal funding that Dartmouth receives from NIH, largely through Geisel and Dartmouth's Thayer School of Engineering ("Thayer"), supports critical scientific and medical research programs aimed at improving health outcomes. Examples of these programs include:

a. The Dartmouth Cancer Center Support Grant, which funds groundbreaking scientific initiatives in cancer immunology, cancer engineering, biological mechanisms, experimental therapeutics, molecular epidemiology, health care delivery science and cancer prevention and control. The program includes an enhanced emphasis on translating research discoveries to hard-to-reach populations, especially those within Dartmouth's rural two-state catchment area of New Hampshire and Vermont. Research from the Dartmouth Cancer Center led to the first cancer immunotherapy, which is now used worldwide and is credited with providing nearly 1 million years of extended healthy lifespan to cancer patients;

b. The Center for Technology and Behavioral Health at Dartmouth ("CTBH"), recognized as an NIH P30 "Center of Excellence," which is dedicated to developing clinical-grade digital therapeutics that enhance access to and quality of behavioral healthcare and tools that have been shown to improve patient outcomes while reducing costs. Research done at CTBH led to the first FDA-approved digital therapeutic approach to treating substance use disorder, directly

addressing the disproportionate level of overdose deaths in the state of New Hampshire;

c. The Center for Molecular Epidemiology, an NIH Center for Biomedical Research Excellence, seeks to translate cutting-edge scientific approaches to enhancing human health discoveries, including new ways to examine the contaminant exposure risk in vulnerable rural populations. This research grant supports the New Hampshire Birth Cohort Study, with the goal of enhancing the health of children, particularly those in rural areas, for generations to come;

d. The SYNERGY Clinical and Translational Science Institute, which, led by faculty at Geisel and Thayer in partnership with Dartmouth Health, is the holder of the only NIH Clinical and Translational Science Award in Northern New England, with a mandate to advance rural healthcare; and

e. The Dartmouth Cystic Fibrosis ("CF") Research Center, one of only seven NIH-funded CF Research and Translation Centers nationwide, which has developed innovative strategies to extend lifespans and improve CF care across the country.

7. Critically, the cost of carrying out these and other NIH priority research activities is only partially covered by "direct costs" that Dartmouth is able to charge to federal grants supporting research. Dartmouth invests significant resources to construct, operate, and maintain purpose-built laboratory facilities, purchase and maintain highly advanced research equipment, and ensure research compliance with numerous federal mandates. A portion of Dartmouth's investment is reimbursed through specifically negotiated "indirect costs" to sustain this critical research infrastructure, without which these research programs would not be possible.

8. By way of example, Dartmouth has invested in and maintains approximately 820,000 square feet of space for researchers, along with additional space for shared research resources. New investments are made every year to upgrade this space, which is necessary for continuing to advance leading-edge research. For example, in 2022, Dartmouth opened two new research-intensive buildings, including a new Engineering and Computer Science Complex ("ECSC"). The ECSC houses several dozen faculty, many funded by NIH to address critical healthcare challenges, including the development of tools to evaluate the antibody response in disease states ranging from infection to cancer, to aid in therapeutic antibody and vaccine design and development, and to explore the growing challenges of student mental health on college campuses. These new facilities, which together added 100,000 square feet to Dartmouth's available research space, represent institutional expenditures of over $310 million.

9. In addition to Dartmouth's investment in new facilities to support research advances, the institution must also maintain its existing research infrastructure in order to deliver on federally-funded research. As reported on our most recently completed National Science Foundation Survey of Science and Engineering Research Facilities, Dartmouth spent $17 million of its own funds for the repair and renovation of research facilities in fiscal years 2022 and 2023, and anticipates spending another $14 million in institutional funds to maintain these existing facilities in fiscal years 2024 and 2025. These investments, to which Dartmouth has already committed, have been made specifically in reliance on our ability to recover a portion of these expenses through the negotiated indirect costs rate with federal agencies like the NIH.

10. Direct negotiations and detailed audits with the federal government in 2022 resulted in the setting of a predetermined rate that Dartmouth had expected in good faith would be applicable through 2029. This rate agreement represents the culmination of a lengthy process

(as specified by 2 CFR 200 Part 200 Appendix III), which required Dartmouth to provide detailed financial data and schedules in accordance with the government's standard format and process for rate proposals including cost pool schedules and a reconciliation to Dartmouth's financial statements. The proposal itself was 254 pages and was certified by a senior finance officer and accompanied by audited financial statements. The cognizant audit agency team reviewed the proposal in accordance with procedures prescribed by the Department of Health and Human Services during a process which took approximately a year.

11. If the NIH's proposed cut to a flat 15% rate across the board comes to pass, Dartmouth's specifically negotiated and agreed indirect-cost recovery rate would be slashed by more than 75%. This would result in a $24 million shortfall as compared to amounts received to support critical research infrastructure in fiscal year 2024.

12. It would be impossible for Dartmouth to absorb such a significant shortfall without making cuts in research programs and related key areas of campus operations. Such cuts would certainly result in a hiring freeze on faculty, postdoctoral associates, and graduate students, directly impacting our ability to conduct advanced research in the public interest and train the next generation of research scientists. These cuts would have the immediate effect of reducing the number of good-paying jobs available in our local community, with knock-on effects impacting the retail and service-sector businesses in the area.

13. Dartmouth would also likely need cut back on the core support facilities and services that we provide to our existing researchers, hampering their ability to do critically important research in an efficient, effective, safe, and secure manner. In the short term, facility projects might be canceled, institutional purchases of specialized research equipment would be put on hold indefinitely, and laboratory renovations would pause. In the longer term, investment

in the renewal of scientific facilities would stop altogether as a necessary step to absorb the financial impact of this new policy application, and where unreimbursed costs are required to remediate a safety issue or otherwise resolve a compliance concern, the institution would be forced to offset these expenses by effecting cuts in other areas, perhaps by implementing significant layoffs. These decisions would be devastating not only to the Dartmouth community but also to the local economy.

14. The world's best scientists will not move to (or stay at) universities where they are not able to conduct world-class research. The reality of this shortfall and the cuts it would necessitate would reduce the amount available for new faculty "start-up" packages, which are required for junior investigators to set up their laboratories and jump start their own new research programs. Our inability to sustain and expand our scientific programs would make it more difficult to attract research-minded physicians to the Dartmouth-Hitchcock Medical Center, a major tertiary care referral site for patients across northern New England. This would inevitably reduce the number of highly-trained specialist clinicians available to support the health needs of the (largely rural) population of New Hampshire and Vermont and give them the care that they deserve, including participation in clinical trials and the receipt of cutting-edge treatments that would no longer be accessible to those without the ability to travel for several hours to a major urban center.

15. Notably, while Dartmouth is fortunate to have a significant endowment, we are not able to make up the difference in operating budget that this massive reduction in indirect-cost support would create by either increasing the endowment distribution or invading endowment principal. The purpose of the endowment is to provide maximum sustainable financial support to Dartmouth to serve its mission in perpetuity. Core to the endowment's purpose is balancing the

interests of current and future generations of Dartmouth students. Maintaining the inflation-adjusted value of the endowment underpins this concept of intergenerational equity.

16. Dartmouth's endowment consists of nearly 6,700 individual funds, each with specific agreements and restrictions. Of Dartmouth's total endowment, 78% is restricted to specific programs and uses and is therefore unavailable to fund a general operating shortfall.

17. The unrestricted portion of Dartmouth's endowment is already committed to support a variety of initiatives including financial aid, student experience, professorships, infrastructure, and enabling support for other areas of the institution. It is also not possible to simply increase the endowment distribution rate because it is limited by standards of prudence under the New Hampshire Uniform Prudential Management of Institutional Funds Act (UPMIFA) and subject to the active oversight of the Charitable Trusts Unit of the State Attorney General's Office.

18. And even if it were consistent with standards of prudential management, increasing the spend of unrestricted money from Dartmouth's endowment would very quickly cripple the institution's ability to fulfill its overall mission, leaving Dartmouth with only restricted funding and no flexibility to allocate resources to research or other unfunded core academic initiatives.

19. In sum, the NIH's actions to limit Dartmouth's recovery of the very real and highly significant investments it has made and will continue to be required to support its research infrastructure will have adverse impacts not only on the institution but on our local community, northern New England, and the largely rural patient population for which accessing world-class, groundbreaking treatments need not mean leaving home.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025, at Hanover, New Hampshire.

/s/ David F. Kotz

David F. Kotz, Provost

EXHIBIT 13

DECLARATION OF DAVID PAUL NORTON

I, David P. Norton, declare as follows:

1. I am the Vice President for Research at the University of Florida in Gainesville, Florida. I have held that position since 2012.

2. As Vice President for Research, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by University of Florida personnel, and could testify thereto.

3. The University of Florida receives substantial annual funding from the National Institutes of Health ("NIH"). In FY2024, the University of Florida received awards from the NIH totaling approximately $320 million. Total expenditures in FY2024 funded by the NIH were approximately $328 million of which approximately $94 million were recovered Facilities & Administration (F&A) costs.

4. The funding the University of Florida receives from NIH supports critical and cutting-edge medical research, which millions of Americans benefit from and depend on. For example:

   a. In the area of cancer, malignant brain tumors in both adults and children remain one of the most difficult cancers to treat. The University of Florida's cancer researchers are actively investigating the use of immunotherapy as a pathway for a cure to this deadly disease.

   b. In the area of neurological diseases, Parkinson's disease is a disabling disorder for many persons in the latter years of life. University of Florida researchers are engaged in basic and clinical research aimed at providing for better outcomes for persons stricken with this terrible disease.

c. Amyotrophic Lateral Sclerosis, also known as ALS or Lou Gehrig's disease, is a neurodegenerative disease which causes the loss of nerve cells in the brain and spinal cord. Researchers at the University of Florida are performing cutting edge genetics research in search of both the root cause and eventual treatment for this disease.

5. Indirect costs, also known as Facilities and Administrative (F&A) costs, are essential for supporting this research. The NIH's proposal to cut indirect cost rates to 15% would end or seriously jeopardize all of the research projects described in paragraph 4.

6. Indirect costs include costs associated with equipment and facilities, along with associated maintenance, that is necessary for advanced research, equipment such as magnetic resonance imaging that is enabling for the neurological research described in 4a) and 4b). Without this equipment, we cannot conduct the research.

7. For example, with respect to the areas of research described in Paragraph 4:

a. Specialized manufacturing equipment is needed for the synthesis of biologics (specialized drugs) used in immunotherapy research.

8. Physical space costs are one of the largest components of indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research that can be done at the University of Florida. The University of Florida is currently renovating a number of biomedical laboratories for researchers funded by the NIH. This renovation project is at risk of being suspended with the imposed cap on F&A rates.

9. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH.[1] These

[1] https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf

mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

10. Recovery of the University of Florida's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

11. Through fiscal year 2025, the predetermined Modified Total Direct Cost (MTDC) indirect cost rates are 52.5% applicable for on-campus Organized Research, 32.6% for on-campus Other Sponsored Activities, 47.5% for on-campus Instruction, and 26.5% for off-campus.

12. The impact of a reduction in the indirect cost rate would be devastating. Of the $328 million in NIH funding that the University of Florida spent in FY2024, approximately $234 million was allocated for direct costs, and $94 million for indirect costs. Similarly, in fiscal year 2025, the University of Florida expects to receive approximately $235 million in NIH funding for direct costs, while $94 million is allocated for indirect costs. And over the next five years, the University of Florida anticipates receiving an average of $250 million from the NIH for annual direct costs. Based on the predetermined indirect cost rate of 52.5% for Organized Research, which was agreed upon by the federal government as of June 26, 2023, the University thus expects to receive approximately $100 million in indirect cost recovery on an annual basis.

13. If—contrary to what the University of Florida has negotiated with the federal government—the indirect cost rate is reduced to 15%, the anticipated University's annual indirect cost recovery would be reduced by approximately $70 million, to $30 million.

14. This reduction will have deeply damaging effects on the University of Florida's ability to conduct research from day one. Most critically, it will necessarily and immediately result in staffing reductions across the board. For example:

a. The University of Florida Research Integrity, Security & Compliance (RISC) unit is charged with ensuring regulatory and institutional compliance for all research activities. Critical areas include research integrity, research misconduct, research security, export control, and conflict of interest. Without appropriate funding for indirect costs, the University would have to reduce staffing within RISC by an estimated 5 individuals, which would immediately impact its ability to ensure university compliance with federal regulations.

b. The University of Florida's Division of Sponsored Programs (DSP) is responsible for the submission of all research proposals for faculty researchers as well as award setup and contract negotiations for the entire campus. Without appropriate funding for indirect costs, the University would have to reduce staffing within DSP by an estimated 18 individuals, thus crippling the its ability to submit proposals, negotiate awards, and setting up subcontracts such as to be consistent with the funding agency's accountability requirements.

c. The University of Florida's Research Division of Contracts & Grants is tasked with the financial stewardship of all federal awards including those from the NIH. This unit is responsible for sponsored project set-up, determining the

allowability of costs, billing, accounts receivable, financial reporting, cost sharing, and grant closeout. Without appropriate funding for indirect costs, the University would have to reduce staffing within Contracts & Grants by an estimated 22 individuals, thus crippling the University of Florida's ability to meet its obligations to manage federally-funded grants, including grants from the NIH, so as to meet the funding agency's accountability requirements.

15. The University of Florida has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. And in some cases, the University of Florida has long-term obligations—for example, tenured faculty salaries, graduate student support, and bond payments related to biomedical laboratory renovation—and it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments.

16. In addition to the immediate impacts and reliance interests described above, there are longer term impacts that are both cumulative and cascading. These include safety issues from lack of staffing for environmental health and safety, as well as human subject research oversight due to reduction in staffing for the Institutional Review Board that oversees our human subject protections program.

17. Disruptions to the University of Florida's research enterprise will also have negative effects in the city of Gainesville FL, the state of Florida, and the broader region as the

University of Florida's research enterprise, particularly the University of Florida biomedical research community, feeds the University of Florida's technology transfer and business incubator programs that are internationally recognized as among the best in the US. Thousands of Florida residents are directly employed by the University of Florida—and it collaborates with state and local partners to help solve regional challenges through joint research and innovation. The University of Florida's research also fuels spending in the regional economy, including by driving discoveries that launch new ventures, attract private investment, and make a positive social impact. A massive reduction in the University of Florida's research budget would immediately and seriously jeopardize these contributions to the local region and to the state of Florida.

18. Finally, slowdowns or halts in research by the University of Florida and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance. The University of Florida's biomedical research enterprise includes research in emerging and known pathogens that threaten agriculture, animals, and human life. Disruptions in the University of Florida's research in these areas will place our country and economy at greater risk.

19. Nor can the University of Florida cover the funding gap itself. With a business model most heavily dependent on research funding, student tuition and state appropriations, it is neither feasible nor logical to seek financial assistance from student tuition or Florida tax payers to subsidize work for the US federal government. While the University of Florida maintains an endowment, it is neither feasible nor sustainable for the University of Florida to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

a. The majority of University of Florida's endowment is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. The University of Florida is not legally permitted to use those funds to cover research infrastructure costs per those donor agreements.

b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, to ensure long-term financial stability for the institution.

c. As a public university tasked by the state of Florida to carefully steward its resources, the University of Florida reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, the University of Florida does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

20. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on the University of Florida—which would in turn force reductions in key investments supporting the University of Florida's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain the University of Florida's academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025, in Gainesville, FL.

David Norton

David P. Norton

EXHIBIT 14

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

ASSOCIATION OF AMERICAN UNIVERSITIES, *et al.*, Plaintiffs, v. DEPARTMENT OF HEALTH & HUMAN SERVICES, *et al.*, Defendants.	Case No.

DECLARATION OF JOHN H. SHAW

I, John H. Shaw, declare as follows:

1. I am the Vice Provost for Research at Harvard University ("Harvard" or the "University") in Cambridge, Massachusetts. I have held that position since January 1, 2022. I am also the Harry C. Dudley Professor in the Faculty of Arts & Sciences, and a Professor of Environmental Science and Engineering in the John A. Paulson School of Engineering & Applied Sciences. I make this declaration in support of Plaintiffs' Complaint and Motion for a Temporary Restraining Order.

2. As Vice Provost for Research, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Harvard University personnel, and could testify thereto.

3. Harvard is a major research institution that receives substantial annual funding from the National Institutes of Health ("NIH"). In fiscal year 2024, for example, Harvard received a total of $684 million in sponsored funding from the federal government, $488 million of which came from NIH. By the end of the fiscal year—which ended on June 30, 2024—Harvard had

approximately 1,570 active NIH grants across the University, many of which were multi-year awards.

4. The funding Harvard receives from NIH supports critical and cutting-edge medical research, which millions of Americans benefit from and depend on. For example:

a. Harvard's cancer research includes identifying mechanisms that drive tumor metastasis and therapeutic development, with the goal of targeting and suppressing cancer at its earliest stages; mapping the metabolic signaling pathways that drive both diabetes and cancer, to restore proper cellular function and prevent disease; and developing a new machine learning method to model the behavior of all 25,000 human genes as they respond to high-intensity treatments such as chemotherapy, which the National Cancer Institute cited as an advancement in basic cancer research that will lay the groundwork for future clinical breakthroughs.[1]

b. Harvard's infectious disease research includes understanding and addressing the global threat of multidrug-resistant infections; developing new tools for global pandemic prevention; and developing new therapeutic antibodies to treat or cure viral diseases.

c. Harvard's microbiome research includes developing new frontiers in precision medicine that can help individuals reduce their risk of cancer and other diseases.

d. Harvard's toxin reduction research includes studying the harm from microplastics on sperm counts and fertility; and developing life-saving

[1] "Advances in Cancer Biology Research," https://www.cancer.gov/about-nci/organization/dcb/progress/cancer-biology-advances (last accessed Feb. 10, 2025).

guidance for vulnerable groups exposed to high levels of toxins, including firefighters and children in rural communities.

e. Harvard's neurological research includes identifying numerous modifiable risk factors for Parkinson's disease and multiple sclerosis, which creates the potential to significantly cut disease incidence and reduce healthcare costs; and efforts to better understand the role of infections in seeding neurodegenerative disorders, with important implications for prevention, diagnosis, and treatment.

5. Indirect costs, also called Facilities and Administrative ("F&A") costs, are real and essential reimbursement of costs incurred by the institution for supporting the entire research enterprise. The NIH's proposal to cut indirect cost rates to 15% would seriously jeopardize all of the research projects described in paragraph 4; examples selected from a very large number of additional research projects that likewise seek to further fundamental understanding of disease, biology, human genetics, and other areas of unmet clinical need, all of which are supported by indirect costs.

6. Indirect costs include constructing and maintaining state-of-the-art facilities required to meet the current technical requirements of advanced research, as well as the procurement and maintenance of equipment necessary to conduct such research. Without this equipment, we cannot conduct the research. For example, with respect to the areas of research described in paragraph 4:

a. Cancer research requires sophisticated equipment, data storage, and computing power to interrogate and synthesize genomics, proteomics, and metabolomics, and to leverage bioinformatics for data analysis.

b. Infectious disease research requires multiple specialized facilities, including advanced centers for bioimaging and genomic studies, a biosecurity Level 3 pathogen core facility, a gnotobiotic mouse facility, and a biosecurity Level 2 insectary. This equipment is essential for basic and preclinical research that leads directly to new insights into diagnosis, treatment, and prevention of infectious diseases such as tuberculosis, HIV, and malaria.

c. Microbiome research requires a -80 degree Celsius cryogenic freezer and other specialized equipment to interrogate how changes in the gut microbiome affect susceptibility or resistance to debilitating diseases including cancer, gastrointestinal disorders, and kidney diseases.

d. Toxin reduction research relies on sophisticated equipment such as mass spectrometry, specialized assays, and significant lab bench space to identify and develop strategies to address a wide array of toxins that cause or exacerbate diseases.

e. Neurological research requires significant investments in international and longitudinal data collection, storage, and analysis.

7. Physical space costs are one of the largest components of indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research that can be done at the University.

8. In addition, indirect costs fund the expenses associated with the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH.[2] These mandates serve many important functions, including protecting

[2] "NIH Grants Policy Statement," HHS (Apr. 2024), https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf.

human and animal subjects involved in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

9. Recovery of Harvard's indirect costs is based on rates approved by the "cognizant federal agency," which for Harvard is the Department of Health and Human Services ("HHS"). Harvard periodically submits an indirect rate proposal to HHS. The proposal then undergoes a review before a rate agreement is approved. Those rates are always established consistent with guidelines set forth by the Office of Management and Budget through its uniform regulation at 2 C.F.R. part 200.

10. The established indirect cost rate (applicable to most grants) is 69% for the University Area through fiscal year 2025, with a reduction to 68.5% for fiscal years 2026-2028; and 69.5% for the Medical School, including the School of Dental Medicine, through fiscal year 2025, with a reduction to 69% for fiscal years 2026-2028. The T.H. Chan School of Public Health is currently working under a provisional-until-amended rate of 54.7% and is in the midst of finalizing that rate through fiscal year 2028.

11. A sudden and unexpected reduction in the indirect cost rate would be disastrous. In fiscal year 2024, Harvard received $354 million of direct NIH funding and $135 million of F&A recovery on NIH awards. A reduction in the rate to 15% would have reduced the indirect funding by $103 million on a full-year basis, to $31 million. In fiscal year 2025, Harvard expects to receive $367 million of direct NIH funding and $140 million of F&A recovery on NIH awards is allocated for indirect costs. A reduction in the rate to 15% would reduce the indirect funding by $107 million

on a full-year basis, more than double the University's operating surplus last year. And over the next five years, Harvard anticipates receiving an average of $402 million a year from the NIH for annual direct costs. Based on the established indirect cost rates described in paragraph 10, the University thus expects to receive approximately $154 million in indirect cost recovery on an annual basis.

12. If the indirect cost rate is cut to 15 percent, that would reduce the University's anticipated annual average indirect cost recovery by $118 million annually, to $36 million a year, for a five-year total of $590 million in cuts to funding that is essential to support the University's research activities.

13. This reduction will have deeply damaging effects on the University's research enterprise from day one. Most critically, it will necessarily and immediately result in staffing reductions across the board, which will immediately slow down research projects, present potential health and safety risks, and even jeopardize national security interests. For example:

a. Harvard's Institutional Review Board ("IRB") is charged with reviewing and managing all research involving human subjects, to ensure the ethical treatment of subjects and the protection of their privacy. Without appropriate funding for indirect costs, the University would have to reduce staffing on the IRB, which would immediately impact its ability to review research projects. That would in turn lead to substantial delays in critical research that relies on human subjects, including projects funded by NIH.

b. Harvard's Environmental Health and Safety Office is charged with the oversight and management of hazardous chemicals and biological agents in laboratories. Reduction in staffing would be inevitable in the short term if

there were a significant reduction in indirect cost recovery, and the impact would grow in the longer term if the situation persists. Such reductions would lead to reduced frequency of inspections, and would jeopardize the proper disposal of hazardous materials from research laboratories. Both of these effects would pose potential hazards not just to laboratory staff, but also to the general population in the vicinity of the laboratories.

c. Over the past five years, research security and the protection of intellectual property ("IP") from foreign adversaries has been a major focus for the federal government, and all universities are required to implement programs protecting IP from foreign influence. These programs are funded *exclusively* by indirect cost recovery. NIH's reduction in indirect costs would immediately and directly impact the University's ability to manage these mandated programs in the interest of national security.

14. The University has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. And in some cases, the University has long-term obligations—for example, with respect to tenured faculty salaries or admitted PhD students—and it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments.

15. In addition to the immediate impacts and reliance interests described above, there are longer term impacts that are both cumulative and cascading. Research is an "additive process," meaning that each discovery is the foundation upon which new information is added, gradually leading to major scientific discoveries. This process requires long-term commitment to conducting uninterrupted scientific work. It also requires continuously investing in upgrading facilities and instrumentation to meet the needs of rapidly changing science and technology.

16. Such has been the foundation of our partnership with the federal government for the past 75 years: We have provided the infrastructure for critical research—thereby taking the upfront risk—and the federal government has provided funding, including reimbursement for the expenses associated with facilities, equipment, and the growing IT and administrative demands needed to support this research enterprise.

17. Slowing down or halting this research—even temporarily—due to inadequate support personnel, facilities, or equipment will have long-lasting effects. Research that has been paused often has to be repeated, as its result may no longer be reliable due to changed conditions—for example, cell cultures that have been unattended to, which generally see impact within days if not attended to in a timely manner, or chemicals that have expired. Advances in technology or other findings might also render paused work obsolete. These impacts, far from being hypothetical, were realized and documented during the short-term pauses necessitated by the COVID-19 pandemic.[3]

18. Disruptions to Harvard's research will also have negative effects in the Cambridge and Boston area, the state of Massachusetts, and the broader region. Harvard is one of the state's

[3] Mike Lauer, "Continued Impact of COVID-19 on Biomedical Research," NIH (Nov. 4, 2020), https://nexus.od.nih.gov/all/2020/11/04/continued-impact-of-covid-19-on-biomedical-research; "Examples of COVID-19 Impacts on the Research Enterprise," AAMC (Apr. 2021), https://www.aamc.org/media/54391/download.

largest employers—in 2023, over 18,700 Massachusetts residents were directly employed by Harvard—and it collaborates with state and local partners to help solve regional challenges through joint research and innovation. The University's research also fuels spending in the regional economy, including by driving discoveries that launch new ventures, attract private investment, and make a positive social impact. A massive reduction in Harvard's research budget would immediately and seriously jeopardize these contributions to the local region.

19. Finally, slowdowns or halts in research by Harvard and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance.

20. Nor can the University cover the funding gap itself. While the University maintains a significant endowment, it is neither feasible nor sustainable for Harvard to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons including:

a. The majority of the University's endowment—around 70 percent—is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. Harvard is not legally permitted to use those funds to cover research infrastructure costs.

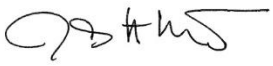
b. As a non-profit institution, Harvard reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, the University does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

c. After sponsored research support and endowment revenue, Harvard's next largest source of revenue is student tuition. But the University is focused on affordability for its students and cannot simply increase tuition rates to cover losses in indirect cost recovery.

19. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on the University—which would in turn force reductions in key investments supporting Harvard's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain Harvard's academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025, at Cambridge, Massachusetts.



John H. Shaw
Vice Provost for Research
Harry C. Dudley Professor of Structural & Economic Geology, FAS
Professor of Environmental Science and Engineering, SEAS

EXHIBIT 15

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

ASSOCIATION OF AMERICAN UNIVERSITIES, *et al.*, Plaintiffs, v. DEPARTMENT OF HEALTH & HUMAN SERVICES, *et al.*, Defendants.	Case No. [___]

DECLARATION OF LAURENT HELLER

I, Laurent Heller, declare as follows:

1. I am the Executive Vice President for Finance and Administration at Johns Hopkins University ("JHU" or the "University") in Baltimore, Maryland. I have held that position since June 2021. In my role, I am responsible for ensuring the overall fiscal and administrative health of JHU. I lead all financial and administrative affairs for the university and oversee the financial offices of the controller, investment management, planning and budget, and treasurer, as well as the administrative areas of human resources, information technology, purchasing, risk management, and internal audit.

2. As the Executive Vice President for Finance and Administration, I have personal knowledge of the contents of this declaration. To the best of my knowledge, the following reflects my review of information and records gathered by JHU personnel, and I could testify thereto.

3. Through highly competitive, peer-reviewed, and merit-based grant selection processes, JHU scientists have been awarded substantial annual funding from the National Institutes of Health ("NIH") each year for many decades. In fiscal year 2024, JHU received a total

of approximately $1,022,300,000 in NIH funding, including approximately $281,446,000 (27.5% of the total) as reimbursement for indirect costs, in connection with 3,232 active awards. In other words, in fiscal year 2024, 72.5 cents of every dollar that JHU received from NIH was spent in direct pursuit of innovative, competitively chosen research projects, while 27.5 cents of every dollar went to cover an agreed-upon portion of JHU's facilities, equipment, and research support necessary to conduct that research.

4. Through its awards to JHU, and its reimbursement of indirect costs, NIH supports critical and cutting-edge medical research, which millions of Americans benefit from and depend on. JHU's research focuses on understanding, mitigating, treating, and curing a broad array of human ailments and life-threatening diseases and conditions, including cancer, cardiovascular disease, malaria, Lyme disease, influenza, Alzheimer's, and many more. A sample of the broader universe of projects that could not proceed as planned if NIH were to dramatically reduce its share of indirect costs includes:

a. A clinical trial comparing standard therapy with immuno-oncology therapy for children and adults with newly diagnosed State I and II classic Hodgkin lymphoma, to determine whether adding immunotherapy to the standard treatment of chemotherapy may increase survival and/or fewer short-term or long-term side effects compared to the standard treatment alone.

b. Hundreds of research projects across many fields, from pediatric cancer biomarkers to suicide prevention to dense suspension physics, involving demanding state-of-the-art computational data science for which Advanced Research Computing at Hopkins ("ARCH") provides essential and secure data storage, high-speed computing, and data processing.

c. The study of DNA coiling and packaging within cells to understand the effects of anticancer drugs on enzymes that regulate these processes, using a cutting-edge cryo-electron microscopy facility. The faculty member who leads this work has been recognized with an Outstanding Investigator Award from the National Cancer Institute.

d. A clinical trial on evaluating the efficacy of a single targeted treatment for multiple food allergies, which has the potential to improve and save lives around the world.

e. Providing mRNA design and manufacturing services to researchers and companies within and outside of JHU, focusing on the treatment of chronic diseases and cancer, at JHU's RNA Innovation Center.

f. A clinical trial concerning an increasingly occurring form of heart failure, which challenged the conventional view of the heart muscle in some three million patients.

g. Study of traumatic brain injury responses in military personnel, athletes, and others, in order to identify high-risk patients for poor recovery and long-term effects like PTSD, depression, and post-concussive syndrome using biomarkers, and to develop effective treatments, at JHU's PRECEDE Biomarkers Laboratory, a recently constructed 1,800-square-foot facility developed in part using indirect cost support.

5. Overall, there are approximately 600 NIH-funded clinical trials underway at JHU. The focus areas of these trials include cancer, pediatrics and children's health, heart and vascular studies, lungs and critical care, the brain and nervous system, gastroenterology and liver studies,

eye studies, diabetes and endocrine studies, gynecology and obstetrics, infection studies, and skin studies. Examples of current NIH-funded clinical trials include studies focusing on innovative treatments for pediatric and young adult craniopharyngioma (a rare type of brain tumor), investigations into right ventricular failure markers in heart failure patients, and a comparative analysis of standard therapy versus immuno-oncology approaches for newly diagnosed Hodgkin lymphoma across various age groups.

6. NIH's reimbursement of its portion of indirect costs is essential for supporting all of the above and a vast array of other critical research at JHU. The proposal to cap indirect cost rates at 15% could end, seriously jeopardize, or require significant scaling back of the projects and infrastructure described above, as well as hundreds more projects of importance for life-saving medical discoveries, treatments, cares, and cures.

7. Physical space costs are one of the largest components of indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research that can be done at JHU. JHU maintains a physical space inventory of owned and leased facilities totaling approximately 19 million square feet across hundreds of buildings and multiple campuses in Maryland and the District of Columbia, among other locations. Each JHU school engaged in federally funded research allocates funds annually to update and renovate its facilities, relying on NIH to pay its share of research-related indirect costs to recover an essential portion of that investment. Any significant reduction in indirect costs will hinder the University's ability to make necessary improvements and could prevent the operation of research buildings in part or whole, severely affecting ongoing research activities.

8. In addition, NIH's share of indirect costs funds the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies

such as NIH.[1] These mandates serve many important functions, including protecting people involved in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

9. NIH's indirect cost payments contribute to, in whole or in part, the maintenance of many facilities as well as shared research lab equipment; IT infrastructure and cybersecurity; regulatory compliance; safety measures; library resources and journal access; space and facilities maintenance; and administrative support to properly steward federal funding, among other necessary costs. Even with its negotiated indirect cost reimbursement rates, JHU is left paying a portion of these costs. Without shared funding of these vital services, infrastructure, and equipment, JHU researchers cannot continue to conduct significant amounts of their research.

10. A reduction in funding for NIH's share of indirect costs will have deeply damaging effects on JHU's ability to conduct research from day one. Most critically, it will necessarily and immediately result in planning for staffing reductions that support the research enterprise. For example:

a. JHU employs numerous research compliance officers, who are charged with ensuring that JHU research comports with the requirements of numerous federal statutes and regulations. Without appropriate funding for NIH's share of indirect costs, the University would have to immediately develop plans to reduce staffing in such areas as research security, conflict of interest

[1] https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf

compliance, research integrity, export controls, biosafety, and classified/restricted research, which would lead to substantial delays in critical research that must be carried out in compliance with federal law.

b. JHU uses indirect cost funding to ensure the protection and ethical treatment of human participants involved in potentially life-saving clinical studies and other research projects. JHU operates three Institutional Review Boards ("IRBs") charged with reviewing and managing all research involving human subjects, including clinical trials, to ensure the ethical treatment of the people involved in our research and the protection of their privacy. For example, the School of Medicine IRB has nearly 12,000 human research protocols. Without appropriate funding for NIH's share of indirect costs, the University may need to immediately develop plans to reduce staffing on the IRBs, which would immediately impact the IRBs' ability to review research projects. That could in turn lead to substantial delays in critical research that relies on human subjects, including projects funded by NIH.

11. A reduction would also significantly reduce support for the facilities and administrative needs that are essential to the types of research discussed above. For example:

a. JHU maintains a Materials Characterization and Processing Center for advanced microscopy, and multiple Bio-Safety Level ("BSL")-2 and BSL-3 facilities dedicated to developing therapies and conducting research on diseases with significant consequences for humans, such as fungal infections, malaria, and Lyme disease. Facilities also focus on influenza virus surveillance, antibody therapy development, and studying human immune responses.

b. JHU also maintains complex equipment including with mass spectrometers and flow cytometers to advance understanding of exposure, as well as biorepositories that preserve critical research specimens.

c. Clinical Research Units and data hubs support clinical trials and disease modeling, while various facilities underpin vaccine development, biomarker research, Alzheimer's studies, and public health campaigns related to tobacco and cannabis. Infrastructure also supports HIV interventions, mental health initiatives, and safe infant sleep practices, and other community-based research.

d. JHU's ARCH facility requires secure data storage, high-speed computing, and telecommunications, essential for effective and efficient research operations.

e. JHU maintains a robust research regulatory compliance infrastructure for all NIH research awards, which includes personnel, technology, professional services, and supplies in such areas as research security, research integrity, export controls, biosafety, and classified/restricted research.

f. JHU meets all necessary safety measures on all NIH research awards, including maintaining radiation, biological, and chemical safety standards in facilities such as BSL-2 and BSL-3 labs that are critical for studying pathogens with significant impacts on human morbidity and mortality, such as Lyme disease and influenza.

g. JHU provides comprehensive library resources and research facilities to support NIH-funded research, ensuring researchers stay informed and innovate and providing essential databases and journals that are critical for conducting literature reviews and following with scientific advancements.

h. JHU invests in the physical infrastructure of research, from laboratories to research-related office space, based upon longstanding rules for NIH contributing its share of indirect costs. Maintenance of this infrastructure includes essential systems such as HVAC, power, ventilation, heating, air conditioning, water, lighting, and specialized technical capabilities and environments crucial for the proper functioning of these buildings, such as clean rooms and temperature-controlled laboratories.

i. Administrative support is necessary to the operation of the overall research infrastructure described above, including sponsored awards management, compliance monitoring, human resources, and financial oversight.

12. Recovery of JHU's indirect costs is based on predetermined rates that have been contractually negotiated and regularly updated with the federal government, based on extensive documentation of JHU's costs and investments for conducting NIH-funded research.

13. Through fiscal year 2026, JHU and HHS contracted for indirect cost rates of 55% for on-campus organized research, 26% for off-campus organized research, 45.5% for on-campus instruction, 26% for off-campus instruction, 27% for other on-campus sponsored activities, and 15.5% for other off-campus sponsored activities.

14. The impact of a 15% cap on NIH's portion of indirect costs would be immediate and devastating to all NIH research at JHU. Of the approximately $1,022,300,000 in NIH funding that JHU received in fiscal year 2024, approximately $281,446,000 (27.5%) was allocated for NIH's share of indirect costs. In fiscal year 2025, JHU has budgeted to receive similar amounts of NIH funding. Based on the indirect cost rates agreed upon by the federal government as of July 23, 2024, and JHU scientists' longstanding success in winning awards through NIH's rigorous

peer-review process, JHU has budgeted to conduct research requiring NIH's share of approximately $280 million or more in indirect cost recovery.

15. If—contrary to what JHU has negotiated with the federal government and relied upon in making research-related investments—the indirect cost rate is reduced to 15%, JHU's anticipated annual indirect cost recovery would be reduced by nearly three-fourths—more than $200,000,000—based on fiscal year 2024 data.

16. Indirect cost reimbursement from private foundations is an inappropriate comparator for federally funded research. Often research supported by private foundations is lower-cost desk-based policy research or field projects (relative to resource-intensive, lab-based research typically funded by the NIH and other federal science agencies). In addition, private foundations use different accounting guidance to determine what qualifies as direct versus indirect research, often permitting direct costs that the government classifies as indirect. Finally, the amount of research conducted by private foundations is a relatively small fraction of our overall research portfolio.

17. In large part due to the support from and partnership with the federal government, JHU and our research university peers have built and maintained a research ecosystem that nurtures scientific inquiry, fuels national economic growth and competitiveness, saves and improves lives, and is the envy of the world. It has taken many decades for research universities to create this ecosystem, but it can be broken and diminished very rapidly if indirect cost funding is dramatically reduced. JHU has a real and lasting reliance interest in the existing research partnership with NIH, which has driven numerous recent actions and current and future plans. We recruit world-class researchers, build buildings, and design new cutting-edge core research facilities on the basis of this decades-long partnership and the federal regulations underpinning it.

18. JHU has for decades relied on NIH to fund its share of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates, and the longstanding success of our scientists in the competitive award process, to inform our budgeting and planning. JHU's most recent agreement with the federal government is dated July 23, 2024, is signed by an official of the Department of Health and Human Services, and provides indirect cost rates running through the end of fiscal years 2026 and 2027. Operating budgets rely on an estimate of both direct and indirect NIH research funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. In some cases, JHU has made long-term obligations—for example, faculty salaries, funding for admitted PhD students, and lease or construction of research facilities—in reliance on budgeted grant funding, including the associated federal share of indirect costs, to fulfill these commitments.

19. In addition to the immediate impacts and reliance interests described above, there are longer-term research impacts that are both cumulative and cascading. Some specialized research core facilities require ongoing funding support. Similarly, lab facilities must be maintained. JHU's robust information technology and cybersecurity infrastructure to support research must be maintained and refreshed on an ongoing basis. Library resources must be kept up to date to avoid limits on access to critical scientific information. A failure to maintain these and other vital components of JHU's research infrastructure would lead to deteriorating physical and technological conditions. Moreover, even if NIH's share of indirect cost funding were subsequently restored to the level contemplated in JHU's contractual agreement with the federal government, certain clinical trials and other experiments might have to be restarted, while others simply might not be able to be restarted.

20. Disruptions to JHU's research will also have negative effects in the Baltimore metropolitan area, the state of Maryland, and the broader region. JHU employs tens of thousands of individuals, many of them Maryland residents—and the University collaborates with state and local partners to help solve regional challenges through joint research and innovation. JHU's research also fuels spending in the regional economy, including by driving discoveries that launch new ventures, attract private investment, and make a positive social impact. A significant reduction in JHU's research budget would immediately and seriously jeopardize these contributions to the local region.

21. Slowdowns or halts in research by JHU and other American universities could allow competitor nations that are maintaining and even expanding their investments in research to surpass the University and the United States on this front, threatening our Nation's national security, economic performance, and leadership in medicine and science.

22. Nor can JHU cover the funding gap itself. As a non-profit institution, the University reinvests nearly all of its revenue into mission-critical activities such as educational programs, financial aid support for students, and non-sponsored research. Many of these activities come with external, legally binding restrictions from donors and other funders as to how or when funds can be spent. JHU therefore has little margin to absorb unexpected funding gaps.

23. Moreover, absorbing NIH's share of indirect costs, even if it were possible, would create long-term budget pressures on JHU—which would in turn force reductions in key investments supporting the University's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain JHU's academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025, at Baltimore, Maryland.

/s/ Laurent Heller
Laurent Heller

EXHIBIT 16

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

COMMONWEALTH OF MASSACHUSETTS, et al.,

Plaintiffs,

v.

NATIONAL INSTITUTES OF HEALTH, et al.,

Defendants.

Case No. _____

Declaration of Dr. Darryl J. Pines

I, Dr. Darryll J. Pines, hereby declare:

1. I am the President of the University of Maryland, College Park ("UMCP"), a constituent institution of the University System of Maryland ("USM"), the State of Maryland's public system of higher education.. This is a position I have held since 2020. As President, I have statutory responsibility and accountability to the USM's governing board, the Board of Regents, for developing the mission and successful conduct of UMCP and for the supervision of each of UMCP's schools and colleges. Prior to holding this position, I was the Dean of the A. James Clark School of Engineering at UMCP, a position I held for 11 years.

2. As the President, I have personal knowledge of the matters set forth below, or have knowledge of the matters based on my review of information and records gathered by my staff.

3. I am providing this declaration to explain certain impacts of National Institutes of Health ("NIH") Notice Number NOT-OD-25-068, *Supplemental Guidance to the 2024 NIH Grants Policy Statement: Indirect Cost Rates,* which purports to immediately reduce indirect costs rates (i.e., Facilities and Administrative ("F&A") rates) to fifteen pecent (15%).

4. UMCP is the State of Maryland's flagship research university and is ranked by Forbes as #12 in the United States among public universities. UMCP enrolls over 40,000 students across twelve schools and colleges and an interdisciplinary Graduate School, and offers over 300 degree programs. UMCP is a global leader in numerous areas of study, including health, data science, climate science, and more. UMCP, along with its sister institution the University of Maryland, Baltimore ("UMB"), engages in cross-cutting research that highlights the intersection of engineering, computer science, AI, and medicine. As one of the nation's leading research universities, UMCP is well positioned to advance and translate public health knowledge to improve health and well-being. Faculty and students are involved in a broad range of scientific endeavors and research centers whose focus spans from the cellular to the societal level. UMPCs laboratories and research programs rely, in part, on NIH funding to make a difference in critical areas, from understanding how respiratory viruses spread through air to climate change's impacts on health, physical activity's benefits to aging brains, innovative approaches to treating cancer, and advancing health equity, among others.

5. UMCP's research is supported by a number of different federal agencies. UMCP's extramural funding totaled over $703 million in State Fiscal Year ("FY") 2024, including $68 million in funding awarded directly by the NIH and $9 million in funding awarded on a pass-through basis from the NIH.

6. UMCP has a Negotiated Indirect Cost Rate Agreement ("NICRA") with the U.S. Department of Health and Human Services dated June 24, 2024. The Indirect Cost ("IDC") Rate in UMPC's NICRA is fifty-six percent (56%) for on-campus organized research. All costs included in UMCP's IDC were determined to be allowable (i.e., permitted to be charged to the Federal Government) based on substantial evidence UMCP produced during the most recent NICRA.

7. UMCP's total blended IDC rate for NIH and other Federal Government funding is already capped by the Federal Government at twenty-six percent (26%) for Administrative costs and is negotiated at thirty percent (30%) for Facilities costs.

8. NIH's reduction of UMCP's IDC rate(s) will eliminate approximately $6 million in funding to UMCP for State FY25 and $16 million for State FY26 – funding that UMCP uses to support its research programs.[1] The loss of these funds will immediately impact UMCP's ability to fund administrative (e.g., department, school, and central administrative payroll and operations) and facilities (e.g., utilities, debt service, maintenance and environmental services personnel and operating costs, and facility renewal) costs in support of NIH research. A reduction in the NIH IDC rate impacts research administration centrally at UMCP and also at the unit level (e.g., colleges/schools and departments).

9. The reduction in IDC rates will directly and severely impact UMCP's ability to submit proposals, negotiate subawards, engage in subrecipient monitoring, comply with financial,

[1] These are estimated numbers only and are not provided for audit purposes.

audit, and internal control requirements, and comply with regulatory oversight responsibilities. Those regulatory compliance obligations include but are not limited to operations of:

(a) the Human Research Protections Office, including the Institutional Review Board, which protects human research subjects;

(b) the Institutional Animal Care and Use Committee and Department of Laboratory Animal Resources, which protect animal research subjects;

(c) the Institutional Biosafety Committee, which reviews and oversees research involving potentially infectious materials;

(d) the Research Security Office, which protects UMCP's research enterprise against malign foreign influence;

(e) the Disclosure Office, which protects against conflicts of interest in federally-funded research;

(f) the Office of Integrity and Responsible Conduct, which handles research misconduct proceedings in compliance with the NIH Office of Intramural Research requirements; and

(g) the Office of Research Safety, which supports the UMCP research community in meeting regulatory requirements and managing health and safety risks related to research activities, including but not limited to biosafety, laboratory safety, and radiation safety.

10. UMCP's sister campus, UMB, performs NIH-funded clinical trials, and UMCP performs other crucial research funded by NIH. At UMCP, NIH funding accounted for nearly ten percent (10%) of UMCP's total funding in FY24.

11. The magnitude of this level of reduction in IDC rates will decimate UMCP's translational and life saving research programs. Research cannot occur absent the critical support structures that IDC reimbursement funds. The existing Federal Government cap of twenty-six percent (26%) on the administrative component of IDC rates, coupled with increasing federal compliance regulations, has put pressure on UMCP to maintain a culture of compliance with limited resources. Imposing yet another cut to both the facilities and administrative cost rates that make up the IDC rate will force a decrease in the compliance oversight structure associated with these regulations, unnecessarily creating more challenges to ensure the safety and integrity of the research enterprise, as well as compliance with increasing regulatory requirements to protect and preserve U.S. national security.

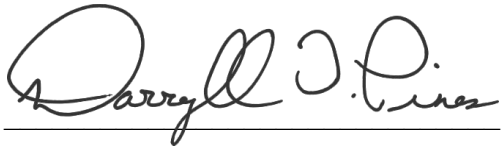
12. With regard to the facilities rate component of IDC rates, the ever-changing landscape of research priorities is always constrained by an institution's ability and agility to stand up the infrastructures needed to support that research – the buildings and equipment that NIH's facilities costs help support and which allow faculty, staff, and graduate students to perform critical work. That infrastructure is needed to maintain the highest quality of outcomes that benefit the public, which is the core mission of the NIH – to provide a public good.

13. I believe that these reductions in IDCs will not just harm UMCP's research enterprise and the research enterprises of other universities, but will result in U.S. research falling further

behind that of other countries. It will be difficult for the U.S. to overcome challenges related to the elimination of faculty, staff, and graduate assistant positions funded directly and indirectly by research dollars, the resulting safety and compliance issues, and the lack of current facilities and equipment to support and spur cutting edge research activities. All will have an immediate and lasting negative impact on UMCP's mission to improve the human condition and to serve the public good of Maryland and society at large through education, research, clinical care, and service.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed this 9th day of February, 2025, in College Park, Maryland.



Dr. Darryll J. Pines

President and Glenn L. Martin Professor of Aerospace Engineering
University of Maryland College Park

EXHIBIT 17

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

ASSOCIATION OF AMERICAN UNIVERSITIES, *et al.*, Plaintiffs, v. DEPARTMENT OF HEALTH & HUMAN SERVICES, *et al.*, Defendants.	Case No.

DECLARATION OF IAN A. WAITZ

I, Ian A. Waitz, hereby state under the penalty of perjury that the following statements are true and accurate to the best of my knowledge, and that I could testify to these matters if called to do so:

1. I am the Vice President for Research of Massachusetts Institute of Technology ("MIT" or the "Institute"), a position I have held since May 2024. The matters addressed herein are based on my personal knowledge or upon information I learned in the course of my duties at MIT, including from others involved in MIT's institutional research, technology transfer, and finance operations.

2. I have been a member of MIT's faculty since 1991. In addition to serving as Vice President for Research, I am currently the Jerome C. Hunsaker Professor of Aeronautics and Astronautics. I previously served MIT as the department head of Aeronautics and Astronautics, Dean of the School of Engineering, and Vice Chancellor for Undergraduate and Graduate Education.

3. In my role as Vice President for Research, I am MIT's senior research officer and have overall responsibility for research administration and policy at the Institute. I oversee MIT's Research Administration Services and Research Compliance units. I also oversee more than a dozen interdisciplinary research laboratories and centers at MIT, including the Koch Institute for Integrative

Cancer Research (the "Koch Institute") and the Center for Clinical and Translational Research. I report directly to the President of MIT.

4. Research conducted at MIT contributes to innovation in areas critical to economic competitiveness, national security, and the quality of life enjoyed by all Americans. Some of MIT's main areas of research focus include health, biotech, artificial intelligence, energy, advanced manufacturing, cybersecurity, and quantum computing. Each year on its campus, MIT conducts approximately $800 million of research sponsored by government, industry, and foundations. Approximately $480 million of this research is sponsored by the federal government. MIT spends roughly an additional $800 million on research from its own resources, including its endowment. This internal investment in research by MIT benefits and complements much of the federally-funded sponsored research on campus, and also decreases the cost of this research to the federal government.

5. MIT's research translates into critical and novel inventions. For ten consecutive years, MIT has produced more patents than any other campus in the nation. In 2024, 323 utility patents were issued to MIT by the U.S. Patent and Trademark Office. MIT holds approximately 4,000 active U.S. patents. To date, MIT has employed or educated 104 Nobel Prize laureates.

6. MIT's research also translates into innovation that helps drive the U.S. economy. A 2015 study[1] identified more than 30,000 active companies founded by MIT alumni, employing 4.6 million people and generating annual global revenues of $1.9 trillion. That study's authors noted that these figures were "roughly equivalent to the GDP of the world's 10th largest economy as of 2014."

7. In the case of the Koch Institute for Integrative Cancer Research alone, over 120 spin-out companies — many headquartered in the local Kendall Square area of Cambridge, Massachusetts

[11] "Entrepreneurship and Innovation at MIT: Continuing Global Growth and Impact," MIT (Dec. 2015), https://entrepreneurship.mit.edu/wp-content/uploads/MIT-Entrepreneurship-Innovation-Impact-Report-2015.pdf.

— have their roots in the Koch Institute's cancer research, with nearly half having advanced their technologies to clinical trials or commercial applications.

8. Each year, MIT negotiates Facilities and Administrative ("F&A") cost reimbursement rates with the Office of Naval Research ("ONR"), its cognizant federal agency for such purpose. The provisional F&A rate for MIT's Fiscal Year 2025 (July 1, 2024 – June 30, 2025), as negotiated with ONR in accordance with and under the authority set forth in 2 CFR Part 200, is 59.0%.[2]

9. MIT received $156 million from the National Institutes of Health ("NIH") in Fiscal Year 2024 (July 1, 2023 – June 30, 2024) for performing sponsored research.

10. MIT conducts research under 406 direct and indirect funding awards from NIH that are currently active for Fiscal Year 2025. This includes 328 grants, 7 contracts, 38 cooperative agreements, 23 fellowships, 5 NIH training grants, and 5 other transaction agreements. These awards involve 193 unique PIs at MIT. If NIH were to reduce the F&A rate on its grants and cooperative agreements to 15.0%, then MIT forecasts it will lose approximately $35 million in reimbursement for costs that support NIH research over the next 12 months alone, assuming that MIT performs a similar level of research activity on NIH grants and cooperative agreements as it did in Fiscal Year 2024. The forecast for NIH-funded grants only, separate from cooperative agreements, is approximately $31 million. If all federal agencies were to cap F&A reimbursements at 15.0% (for grants, cooperative agreements and contracts), MIT forecasts it will lose approximately $113 million over the next 12 months in reimbursements for costs that support that research enterprise.

11. MIT forecasts direct sponsored research activity in its annual operating budget, and it budgets the associated F&A cost reimbursement to pay for maintaining the buildings in which the research occurs and supporting the infrastructure and business functions necessary to conduct the

[2] ONR Negotiation Agreement (June 20, 2024), https://ras.mit.edu/document/mit-fy25-provisional-fa-rates-letter.

research. Examples of the costs supported by F&A reimbursement include the costs of building, maintaining, operating and renewing research buildings, laboratories and equipment; hazardous materials management; data storage; radiation safety; insurance; administrative systems and services; and compliance with federal, state, and local regulations.

12. Each principal investigator ("PI") at MIT conducting research uses the agreed-upon project budget, as awarded by NIH and other federal granting agencies, to develop a financial plan for performing each supported research project, many of which span multiple years. This budget typically includes supporting graduate student researchers, postdoctoral researchers, other research staff, equipment, and other research costs. It is on the basis of these project-level budgets in hundreds of individual labs across MIT's campus that individual PIs make commitments to hire graduate students, researchers and staff. Those people then derive their education and their livelihoods from this funding.

13. The costs being reimbursed partially through the F&A rate are real costs. The final rate is not speculative, but rather established each year after audit by the federal government of actual costs incurred. These costs still exist and must be covered, even if the F&A reimbursement rate is unilaterally reduced. Approximately two-thirds of F&A costs at MIT are facilities-related, and MIT cannot realistically take immediate action to eliminate utilities, maintenance and other activities required to operate buildings and laboratories that conduct federally funded research.

14. As a direct result of real and threatened federal cost-cutting in fundamental research and potential increased levies on universities, including this attempted reduction in F&A cost reimbursement rate, MIT is being forced to take immediate and contemporaneous action to reduce its financial exposure. The Institute is implementing operating budget reductions and curtailing its capital investments. At the Institute level, MIT is deferring capital projects, notably including research infrastructure and space renewals, lab equipment installations, ventilation air capacity improvements, and energy efficiency upgrades. MIT also expects to implement a partial hiring freeze across the

Institute this week. In addition, this week MIT is issuing central budgets to its internal units that mandate cuts from current resource levels. Among the possible ways these budget cuts will be implemented by internal units include: admitting fewer graduate students—an engine of MIT's research activity and the future of U.S. science; undertaking separate reductions in employee positions; limiting or deferring investment in advanced research facilities; and scaling back other forms of investment. These actions collectively will decrease the amount of scientific research MIT can conduct, affect individuals and families, and could ultimately require MIT to either increase tuition and/or decrease financial aid for students.

15. The threatened rate reduction will also have a direct impact on the NIH-funded research being conducted at the Institute. For example, the Koch Institute has been funded by a Cancer Center Support Grant from the National Cancer Institute for many years, and this support has enabled multiple improvements in cancer care, helping to revolutionize how cancer patients are cared for across the country. Over 60 PIs are dedicated to this effort, and the funds from F&A cost reimbursements provide them with access to essential support staff, as well as state-of-the-art equipment and infrastructure, to make that research possible. Just to name a few ongoing projects that rely on such funding:

a. Researchers are working to improve the analysis of CT scans to find lung cancers in patients earlier than they would be found otherwise, which will both save lives and reduce the costs of treatment for millions of Americans. This research depends on the Koch Institute's efforts to modernize its computational support infrastructure, including resources that enable artificial intelligence and machine learning approaches to improving cancer care. This effort would be severely disrupted, and innovation slowed, by major cuts to research funding.

b. Acute leukemia is the most common cancer in children, but it also occurs in adults. While many children are cured, not all are, and fewer than 50% of adults

survive this disease. Almost all patients respond to initial treatment, but so-called "residual disease" can lead to recurrence and death in many patients. Research supported by MIT's Koch Institute infrastructure has developed a unique device to use the physical properties of cancer cells found in residual disease to predict how that residual cancer will respond to different drugs, with the aim of eliminating residual disease and dramatically improving chances of recovery. The potential success of this approach will either be delayed, or not realized at all, if funding is substantially reduced.

c. New specialized light-based imaging approaches are being developed to find pre-ovarian cancer lesions in the fallopian tubes. Ovarian cancer is diagnosed in approximately 20,000 women every year, and most have advanced and incurable disease that will result in death. This new technology helps to identify ovarian cancer lesions earlier, which could lead to better detection of the disease and higher chances of survival. This research relies on Koch Institute infrastructure, and it would be slowed or stopped if federal funding is cut.

16. For an example outside the Koch Institute, MIT's Picower Institute for Learning and Memory is leading an active $2.8 million grant to investigate the use of non-invasive sensory stimulation to manipulate neural oscillations. If successful, this work will improve the accessibility, safety, and efficacy of therapeutic intervention for Alzheimer's disease. Alzheimer's disease is a pervasive neurodegenerative disorder that causes memory loss and dementia. Approximately 7 million Americans are living with Alzheimer's disease. There are several approved treatments for the disease but none of them can meaningfully halt or reverse the disease progression. MIT researchers have developed a non-invasive and highly accessible approach to combat Alzheimer's disease using patterned light and sound stimulation. With private support, the team has already completed pilot

Phase 1 and Phase 2A clinical studies, and the researchers aim to accelerate translation of the findings to benefit patients. The NIH support for this grant is crucial to understanding how this approach impacts interactions between neurons and microglia – that is, how and why it works – to support its continued therapeutic development. A reduction in NIH funding would delay this innovative and important work, and put its success in jeopardy.

17. Over time, the NIH cuts will also degrade MIT's advanced research capacity as a whole, because they will limit the Institute's ability to invest in its core research enterprise at a time in global competition when the United States wants its scientific and technology research at its strongest.

18. Research universities like MIT are critical components of innovation economies in their local geographies. MIT is at the center of Kendall Square in Cambridge, Massachusetts. Kendall Square houses an array of life sciences and technology firms, start-ups, industry, and venture capital firms. MIT and Kendall Square are also closely linked to area universities and hospitals, part of a thriving regional ecosystem of discovery, invention, and economic impact which materially contributes to the improvement of human health and scientific discoveries.

19. MIT employs nearly 14,000 Massachusetts residents, including more than 2,300 Cambridge residents. Spending from students, staff, and faculty support the local economy. Tourism dollars tied to MIT flow to the Cambridge and Massachusetts economies. MIT is also the longtime top taxpayer in the City of Cambridge because the Institute has historically chosen to invest in its home municipality. 2024 tax payments related to MIT real estate holdings totaled $96.7 million, which represents 16.8% of the Cambridge tax levy.

20. Relatedly, MIT's federally funded research also includes important partnerships with the Commonwealth of Massachusetts. For example, MIT presently has four subawards of NIH

funding active with the University of Massachusetts Medical Center, including for research into the human genome, systems genetics of tuberculosis, and malaria prevention.

21. A loss of federal funding would significantly constrain MIT's ability to invest in the people and facilities that make up its research enterprise. Over time, this would lead to less investment in Massachusetts; have negative cascading impacts for MIT's research partners in academia, medicine, and industry; and undermine economic growth across both Massachusetts and the country.

22. Research universities like MIT contribute significantly to innovation and the strength of the U.S. economy, and federal research funding is the key to these benefits. The return on investment is significant. Analysis by the organization United for Medical Research[3] suggests that each $1.00 of NIH-funded research in fiscal year 2023 generated $2.46 in new economic activity.

23. Scaling back the research capacity of U.S. universities, including MIT, would slow scientific progress and have detrimental economic consequences. Not only would the global community lose ground toward cures, new technologies, and other innovation, but less research in the United States would also threaten to impede progress on American medical, scientific, technical, and economic priorities; result in fewer jobs and slower economic growth; cede to other nations American companies' competitive advantage as a catalyst of new industries; and weaken long-term U.S. competitiveness against global adversaries, particularly as countries like China continue to boost their research funding and research infrastructure.

24. MIT cannot simply make up an increased gap in annual federal research funding by withdrawing monies from its institutional endowment. As noted above, MIT already matches

[3] "NIH's Role in Sustaining the U.S. Economy," UMR (2024), https://www.unitedformedicalresearch.org/wp-content/uploads/2024/03/UMR-NIHs-Role-in-Sustaining-the-US-Economy-2024-Update.pdf.

sponsored research funding nearly dollar-for-dollar with research spending from its endowment, other charitable funds, and discretionary resources.

25. MIT's endowment is principally made up of individual donations made for specific purposes and invested for lasting impact. MIT is legally required to use endowment returns consistent with the donors' wishes and the purposes for which each endowment fund was established. Currently, approximately 80% of MIT's endowment is subject to such restrictions. MIT cannot reallocate these funds to cover a loss of federal reimbursements for research costs. Moreover, MIT's endowment is a resource intended to provide support for the Institute's costs in perpetuity. The Institute cannot responsibly liquidate the endowment without jeopardizing that function, draining the Institute of resources needed to sustain cutting-edge research capacity for future generations.

26. In addition, MIT's endowment supports approximately 50% of the total cost of undergraduate tuition: MIT's financial aid to undergraduates totaled $159 million last year, including $136 million to cover tuition and $23 million toward students' living expenses. As a result of MIT's financial aid policies, last year, almost 40% of undergraduates attended MIT tuition-free and 87% of undergraduates graduated debt-free. Similarly, MIT funds 62% of the tuition for the roughly 7,000 graduate students at the Institute through fellowships, subsidies, and other resources. NIH's attempted reduction in F&A rate will make such financial aid levels more difficult to maintain in the long-term and lead to increased financial burden for students and families.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this day, February 10, 2025, at Cambridge, Massachusetts.

/s/ Ian A. Waitz
Ian A. Waitz

EXHIBIT 18

DECLARATION OF ARTHUR LUPIA

I, Arthur Lupia, hereby declare:

1. I am Interim Vice President for Research and Innovation at the University of Michigan, a position I have held since 2024. As Interim Vice President, I have oversight of the university's entire research enterprise. Prior to holding this position, I was an Assistant Director at the National Science Foundation (2018-2022) and I co-chaired the Open Science subcommittee for the White House Office of Science and Technology Policy (2019-2021).
2. As Interim Vice President, I have personal knowledge of the matters set forth below, or have knowledge of the matters based on my review of information and records gathered by my staff.
3. I am providing this declaration to explain certain impacts of National Institutes of Health ("NIH") Notice Number NOT-OD-25-068, *Supplemental Guidance to the 2024 NIH Grants Policy Statement: Indirect Cost Rates,* which purports to immediately reduce indirect costs payments to 15%.
4. The University of Michigan is Michigan's flagship research university. It's research saves lives through medical breakthroughs and drug discoveries, supports national security through research in areas like engineering, and creates thousands of jobs in technology areas that are critical to the nation. The university partners extensively with the private sector, including world-leading American medical device and pharmaceutical companies, job-creating startups and innovative small businesses to transform groundbreaking research into outcomes that save lives. This research improves quality of life for people across our state and the nation as a whole. In 2024, the University of Michigan conducted approximately $801 million in NIH-funded research.

5. The University of Michigan's currently Negotiated Indirect Cost Rate Agreement ("NICRA") with NIH sets the Indirect Cost ("IDC") Rate at 56%.
6. NIH's reduction of the University of Michigan's IDC rate[s] will eliminate approximately $181 million in funding that the University of Michigan uses to support its research programs.
7. Based on data from clinicaltrials.gov, there are currently 425 NIH-funded interventional clinical trials underway and not yet completed at the University of Michigan. Of these, 139 are testing a drug, 105 a procedure, 23 a device, and the remainder another type of intervention. Prevention of "death" and "mortality" and pursuit of improved "survival" are described as primary outcomes being tested in 161 of these trials.
8. The University of Michigan next anticipates drawing funds on or around March 7, 2025. The loss of these funds will immediately impact the University of Michigan's ability to draw critical funds used to pay expenses associated with these programs (e.g., facilities costs, mortgages, payroll, infrastructure used to support research, clinical trials).

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed this 10th day of February, 2025, in Ann Arbor, Michigan.

Arthur Lupia

Vice President for Research and Innovation (*interim*)
University of Michigan

EXHIBIT 19

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

COMMONWEALTH OF MASSACHUSETTS, et al., Plaintiffs, v. NATIONAL INSTITUTES OF HEALTH, et al., Defendants.	Case No. _____

Declaration of Douglas A. Gage, Ph.D.

I, Douglas A. Gage, hereby declare:

1. I am the Vice President for Research and Innovation at Michigan State University (MSU), a position I have held since 2020. As Vice President for Research and Innovation, I oversee strategic initiatives and support for the university s research enterprise and approximately $932 million in annual research expenditures. Prior to holding this position, I was an Assistant Vice President in the university s Office for Research and Innovation. I am also a professor in the Department of Biochemistry and Molecular Biology.
2. As the Vice President for Research and Innovation and having been a researcher for more than 30 years, I have personal knowledge of the matters set forth below, or have knowledge of the matters based on my review of information and records gathered by my staff.
3. I am providing this declaration to explain certain impacts of National Institutes of Health (NIH) Notice Number NOT-OD-25-068, *Supplemental Guidance to the 2024 NIH Grants Policy Statement: Indirect Cost Rates,* which purports to immediately reduce indirect costs payments to 15% from 57%.

4. MSU is Michigan s State University and a leading research university. Founded in 1855, MSU was the nation s pioneer land-grant university leading a bold nationwide experiment to democratize higher education and bring science and innovation into the everyday lives of communities across the United States.
5. MSU s human health research initiatives include translational neuroscience (with a focus on Alzheimer s and Parkinson s diseases); pediatric and human development (including autism); obstetrics, gynecology, and reproductive health; cancer; and stroke. The backbone of this research is supported and directed by the NIH.
6. MSU receives NIH funding and has annual NIH expenditures of approximately $136 million.
7. MSU has a Negotiated Indirect Cost Rate Agreement (NICRA) with NIH, effective as of July 1, 2024. The Indirect Cost (IDC) Rate in MSU s NICRA is 57%.
8. MSU s total blended IDC annual funding for NIH funding is $39 million.
9. NIH s reduction of MSU s IDC rate will eliminate approximately $27 million in yearly funding that MSU uses to support its research programs. The loss of these funds will immediately impact MSU s ability to draw critical funds used to pay expenses associated with the reimbursement for activities supporting research, including debt service, cost of federal compliance and oversight, salaries and benefits, waste removal, insurance, utilities in research facilities, and other facility maintenance costs. These costs are directly incurred on behalf of research activities, but they are required to be incorporated into the indirect cost recovery rate calculation.
10. These reimbursement changes will impact MSU by reducing support for the costs directly required for research, but which are included in the federal indirect cost recovery structure. These include support for personnel involved in federally mandated oversight for

increasingly complex compliance requirements, funding for debt service, and other costs as listed above, none of which can be included in direct costs. The reduction in funding will not eliminate these costs; therefore, reductions in staffing, as well as potential stoppage of construction projects, will be required to cover these costs. The reduction in staffing will make compliance increasingly more difficult to ensure.

11. The NIH s reduction will, as one example, impact MSU s Grand Rapids Innovation Park. MSU s Grand Rapids Innovation Park is a vital hub for biomedical research and health technology, and it fosters collaborations that lead to transformative health discoveries and improves the quality of life for ALL Michiganders, and potentially all Americans. The NIH s reduction of critical dollars will disrupt, and likely fully stall, critical patient research projects and delay the development of life-savings therapies, including those that involve neurodegenerative diseases (such as Alzheimer s disease and related dementias and Parkinson s disease) and cancer. One example is MSU s collaboration with BAMF Health, a cutting-edge cancer diagnostic and therapeutic company in the Grand Rapids Innovation Park. MSU provides BAMF Heath with leased access to a cyclotron MSU built for radiopharmaceutical research. BAMF uses this access to provide novel treatment for cancer patients. The NIH s reduction will also impact the region, leading to the loss of jobs that provide direct care to the Grand Rapids, Michigan community, as well as diminish the healthcare advancements that the community celebrates.

12. The NIH s reduction will also disrupt MSU s MIRACLE Center. The MIRACLE Center is one of 12 Centers of Excellence nationwide funded by the NIH s IMPROVE (Implementing a Maternal health and Pregnancy Outcomes Vision for Everyone) initiative, which uses indirect costs to deliver care and information to mothers and children. The NIH s reduction

would immediately and negatively impact 20 counties in Michigan that the MIRACLE Center serves.

13. The NIH s reduction will also harm the transformative Henry Ford Health (HFH) MSU partnership. To expand and enhance clinical education, biomedical research, and clinical care throughout Michigan, and after years of planning, MSU and HFH are constructing a new $330M research building in Detroit, Michigan. When complete in 2027, the building will house 80 research teams, with a total of nearly 500 new jobs to support innovative research efforts in cancer, cardiovascular, and neurosciences (including stroke, Alzheimer s, and neurofibromatosis). The NIH s reduction will require an immediate response by MSU and HFH, likely causing the project to be at least paused and even ultimately abandoned, which will have real economic (up to 1,000 construction jobs will be lost) and clinical impacts.
14. MSU next anticipates to draw funds on or around Friday, February 14, 2025. At that time, the reduced IDC rate will reduce reimbursement for actual expenditures incurred, and MSU must begin to reduce staffing and identify other reductions, which will be detrimental to attaining committed research goals.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed this 9th day of February 2025, in East Lansing, Michigan

Douglas A. Gage

Vice President of Research and Innovation,
Michigan State University

EXHIBIT 20

DECLARATION OF ANSHUMAN RAZDAN

I, Anshuman Razdan, declare as follows:

1. I am the Vice President for Research and Innovation at the University of Oregon ("UO") in Eugene, Oregon. I have held that position since July 1, 2022, and I also hold a tenured full professor position in the Department of Computer Information Science at UO. Previously, I was the Associate Vice President for Research at the University of Delaware (2016 – 2022) and held faculty and administrative positions at Arizona State University (1996 – 2016).

2. As Vice President for Research and Innovation, I have personal knowledge of the contents of this declaration or have knowledge of the matters based on my review of information and records gathered by UO personnel, and could testify thereto.

3. The University of Oregon receives substantial annual funding from the National Institutes of Health ("NIH"). In Fiscal Year 2023-24, the University of Oregon had 254 NIH awards which resulted in $54 million of research expenditures, including $14 million for facilities and administration.

4. The funding that the University of Oregon receives from NIH supports critical and cutting-edge medical research, which millions of Americans benefit from and depend on. For example:

Category 1: Prevention Science – Impacts at-risk kids, youth, and adults

a. UO has an $11 million NIH grant that supports a center focused on understanding, preventing, and providing interventions to parents who are opioid users.

b. Additionally, UO has received a $3.7 million NIH grant to build a new approach to classroom behavior, the Inclusive Skill-Building Learning Approach (ISLA), which provides an alternative to removing students from classrooms and schools.

UO Professor Dr. Rhonda Nese and her team received this grant to test the model in 60 middle schools across six states (Oregon, Alabama, California, Georgia, Hawaii, and Texas).

Category 2: Neurosciences: Unlocking basic mechanisms and using zebrafish as a model organism for human diseases

c. Two NIH-funded resources at the UO support zebrafish-related research worldwide: The Zebrafish Information Network (ZFIN) is the centralized, online database for zebrafish genetic and genomic data. ZFIN provides expertly curated, organized, and cross-referenced information about zebrafish to the international research community. The Zebrafish International Resource Center (ZIRC) is a centralized repository for zebrafish genetic stocks and research materials services that are available for distribution to the international research community. As detailed below, UO's work in innovating this model for enabling medical research has been a major contributor to health research around the world.

5. Indirect costs are essential for supporting this research. The NIH's proposal to cut indirect cost rates to 15% would end or seriously jeopardize all of the research projects described in Paragraph 4(a)-(c).

6. Examples of facilities and equipment supported as indirect costs include our Terrestrial Animal Facility, the Aquatic Animal Facility including a large zebrafish facility, the Genomics and Cell Characterization Core Facility, the Lewis Center for Neuroimaging that operates two FMRIs, and the Research Greenhouses. Without these facilities that house state-of-the-art equipment, we cannot conduct the vital research supported by NIH grants.

7. Indirect costs also help fund a cadre of experts needed to run and maintain advanced equipment, including skilled technicians and scientists with advanced degrees (up to PhD). As one example, the live animal research facilities on UO's campus (both terrestrial and aquatic) require trained professionals who adhere to strict care requirements mandated by federal and state law, making them very expensive to operate.

8. To illustrate some examples of indirect costs with respect to the areas of research described in Paragraph 4(a)-(c) above:

a. Psychologists and Prevention Science researchers rely on clinical trials, some involving our advanced neuroimaging facilities that operate two FMRIs. Without the ability to image brain function, the researchers could not understand and correlate cause and effect relationships.

b. The University of Oregon is known for the discovery of the scientific fact that the tiny zebrafish can be used as a model organism for human diseases. NIH has funded a zebrafish facility that has maintained thousands of genetic lines. Researchers from around the world using zebrafish request custom crafted genetic lines and our facility ships them. Without this facility, not only UO faculty, but also researchers in the U.S. and around the world, will be left without a source to supply them the zebrafish for their experiments, thus hindering advancement of their research. Neuroscientists working on solving Parkinson's, Alzheimer's, and other devastating diseases rely on understanding and experimenting on the zebrafish first before applying them to higher order animals and, finally, to humans.

9. Physical space costs are one of the largest components of indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research

that can be done at the University of Oregon. Indirect costs are extremely important as part of cost recovery. They pay for utilities to run the labs where the research is happening. At UO, we have one building under construction that will house a bio-medical engineering faculty and their labs, as well as student spaces and equipment.

10. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH.[1] These mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

11. Recovery of the University of Oregon's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

12. UO's current negotiated rate for organized research is 49% (up from 47.5%), last negotiated August 2023 and valid through June 30, 2027. The rate is 48% for sponsored instruction and training, 33% for other sponsored activities, and 26% for off-campus activities.

13. The impact of a reduction in the indirect cost rate would be devastating for UO. Of the $36 million in NIH funding that the University of Oregon received in fiscal year 2024, approximately $18.7 million was allocated for direct costs and $17.3 million for indirect costs. Similarly, in fiscal year 2025, the University of Oregon expects to receive approximately $21 million in NIH funding for direct costs, while $19 million is allocated for indirect costs. And over

[1] https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf

the next five years, University of Oregon anticipates receiving an average of $21 million from the NIH for annual direct costs. Based on the predetermined indirect cost rate of 49%, which was agreed upon by the federal government (HHS) as of June 25th, 2024, the University thus expects to receive approximately $19 million in indirect cost recovery on an annual basis.

14. If—contrary to what the University of Oregon has negotiated with the federal government—the indirect cost rate drops to 15%, that will reduce UO's anticipated annual indirect cost recovery from NIH by over $10 million.

15. This reduction will have immediate and deeply damaging effects on the University of Oregon's ability to conduct research. Most critically, it will necessarily and immediately result in staffing reductions across the board. UO will have to cut the substantial number of services that are completely dedicated to supporting research. For example:

a. The Institutional Animal Care and Use Committee ("IACUC") is established by federal mandate at institutions that use live, vertebrate animals for research, teaching, and testing activities. The IACUC oversees and evaluates all aspects of the institution's animal care and use program. Besides the committee, UO must have at least one full-time veterinarian and animal welfare manager and support staff. This is separate from the core facility that houses the animals. UO may not be able to keep up with federal mandates for animal facilities, and some or all might have to shut down.

b. UO's Institutional Review Board ("IRB") is charged with reviewing and managing all research involving human subjects, to ensure the ethical treatment of subjects and the protection of their privacy. Without appropriate funding for indirect costs, UO would have to reduce staffing on the IRB by an as-yet-unknown number of

individuals, which would immediately impact its ability to review research projects. That would in turn lead to substantial delays in critical research such as clinical trials that rely on human subjects, including projects funded by NIH.

c. UO's Sponsored Projects Services ("SPS") Office provides fiscal and compliance oversight of sponsored research spending. SPS also provides guardrails and training to prevent fraud, abuse, and waste of federal funds, which are critical functions.

d. Other research integrity or compliance issues such as Conflict of Interest and Commitments, export controls, and research misconduct issues would be impacted due to layoffs of expert staff in these areas.

16. Disruption of F&A funds will also cause our Libraries and IT department to suffer, both of which require some assistance for their financial sustainability. Books, journals, high-performance computing, and data storage are critical to conducting state-of-the-art research.

17. The University of Oregon has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-doctoral students, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. Training graduate students and post-doctoral students is part of the mission of UO, aligned with the mission of the NIH. Without the funding, UO could not cover the cost of teaching and training students and postdocs. Thus, it would harm the nation and society if we are not developing talent for the next and the following generations.

18. In addition to the immediate impacts and reliance interests described above, there are longer term impacts that are both cumulative and cascading. A sudden loss of funding will require us to triage to ensure that critical life-safety issues are covered, biohazards are controlled, animals receive care, and all rules governing the use of human subjects are covered. What will be left behind are longer term functions such as continuity of our lab safety programs, repair and replacement of aging equipment, and important training to keep our staff fluent in the state of the art with respect to both science and safety.

19. Disruptions to the University of Oregon's research will also have negative effects in the Eugene area, the state of Oregon, and the broader region. UO directly employs more than 5,000 Eugene residents, making us one of the largest employers in our region. Our employees are, predictably, highly educated and enormously dedicated to the production of knowledge and the attainment of college degrees. We are dedicated to helping to solve regional challenges like earthquake risk management and the early detection of and prevention of wildfires. A massive reduction in the University of Oregon's research budget would immediately and seriously jeopardize these contributions to the local region.

20. Nor can the University of Oregon cover the funding gap itself. We are a tuition-dependent institution with limited support from the State. The legislature provides roughly 7% of our total revenues for operation. The State's support for our research, which is enormously appreciated, is a drop in the bucket compared to the real costs of keeping a world-class research operation current. While the University of Oregon Foundation, a separate 501(c)(3) that is independent of the university, maintains an endowment on behalf of the University of Oregon, it is neither feasible nor sustainable for UO to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

a. The majority of the University of Oregon Foundation's assets—around 97.6%—is restricted to specific donor-designated purposes, such as scholarships or faculty chairs, or the assets are restricted in time. The University of Oregon Foundation and the University of Oregon are not legally permitted to use those funds to cover research infrastructure costs unless those restrictions specifically designate this purpose.

b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically around 4%, to ensure long-term financial stability for the institution.

c. As a non-profit institution, UO reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In the current fiscal year, the University of Oregon is forecasting a deficit in its Education and General Fund, the fund used for general education and administrative functions of the institution. This deficit is due to many economic forces impacting both revenues and expenditures and is requiring significant examination of cost-cutting measures. In other words, unlike for-profit organizations, UO does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students that are already under significant stress and are primarily funded by student tuition dollars.

21. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on the University of Oregon—which would in turn force reductions in key investments supporting UO's faculty, students, staff, research, and teaching

infrastructure, as well as other critical activities needed to maintain University of Oregon's academic excellence.

22. I understand that one argument for reducing the federal government's contribution to indirect costs is that universities do not charge the same costs to foundations who fund research. From my experience, this is false. In reality, at least with respect to the University of Oregon, we accept relatively few biomedical-related foundation grants. Within those grants, we generally do not include the same sorts of costs in what foundations consider "indirect costs." Rather, much of what is considered "administration" by federal agencies like NIH are put into the direct costs of foundation grants. We negotiate with foundations to allow fully loaded charges and administrative costs as a component of "direct" costs. Under federal statutes, we are forced to offer the least costs we can justify to cover our true costs for facilities and administration. Furthermore, foundations do not generally impose the strict (and costly) regulatory conditions that NIH typically imposes.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025, at Eugene, Oregon.

/s/ Dr. Anshuman Razdan
Dr. Anshuman Razdan

EXHIBIT 21

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

ASSOCIATION OF AMERICAN UNIVERSITIES, *et al.*, Plaintiffs, v. DEPARTMENT OF HEALTH & HUMAN SERVICES, *et al.*, Defendants.	Case No. [___]

DECLARATION OF ELIZABETH DUGGINS PELOSO

I, Elizabeth Duggins Peloso, declare as follows:

1. I am the Senior Associate Vice Provost and Senior Associate Vice President for Research at the University of Pennsylvania ("Penn"). I have held that position since July 1, 2024.

2. In my role, I have personal knowledge of the contents of this declaration, or I have knowledge of the matters based on my review of information and records gathered by Penn personnel, and could testify thereto.

3. Penn is one of the nation's top research universities, not only generating important new knowledge in the fields of medicine, technology, business, science, and beyond, but also applying this knowledge to improve the lives of individuals and communities in the United States and around the world.

4. For example, the basic and clinical research findings emerging from our laboratories and hospitals improve the treatment of a wide range of medical conditions and contribute to the foundation of knowledge upon which medical innovations rely.

5. Vital research at Penn is made possible by funding provided by the National Institutes of Health ("NIH"). Penn Medicine and the Perelman School of Medicine consistently rank in the top 5 percent in the nation among academic medical centers for research awards granted—most in the form of outside funding, such as NIH research awards.

6. Penn receives substantial funding from NIH. In the Penn research system alone, there are more than 1,803 active NIH awards, amounting to a total of $2.6 billion.

7. Indirect costs (or "F&A" costs) are essential for supporting this research. The NIH's proposal to cut indirect cost rates to 15% would end or seriously jeopardize research projects at Penn.

8. Recovery of Penn's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

9. Through fiscal year ending June 30, 2027, the negotiated indirect cost rate for on campus research is 62.5%, reflecting the magnitude of Penn's institutional costs that support, and are thus appropriately allocated across, multiple research projects. Penn's indirect cost rate is not an indicator of inefficiency or profligacy; to the contrary, it merely reflects that critical research-supporting resources are shared across multiple cost objectives.

10. Reducing Penn's indirect cost recovery rate from the negotiated rate of 62.5% to 15% would have substantial consequences. For calendar year 2025, assuming 11 months will be used as impacted by the change, Penn would have expected F&A on NIH awards to be $232.6 million at our current rate. The 15% cap results in a loss of $170.9 million, and a recovery of only $61.7 million in F&A return.

11. This reduction will have deeply damaging effects on Penn's ability to conduct research.

12. I understand that, according to the NIH, in fiscal year 2023, every $1 of NIH funding generated approximately $2.46 of economic activity. *See* NIH, Direct Economic Contributions, https://www.nih.gov/about-nih/what-we-do/impact-nih-research/serving-society/direct-economic-contributions.

13. And I understand that Penn, more broadly, generates $21.5 billion in annual economic activity in the region, which includes $42 million in daily economic activity in the city of Philadelphia. *See* University of Pennsylvania, Penn's Economic Impact on Pennsylvania and Philadelphia, *https://www.evp.upenn.edu/strategic-initiatives/community-and-economic-development/economic-impact-on-pennsylvania-and-philadelphia.html*

14. The effects will be immediately felt in clinical trials involving both human and animal subjects. At Penn, there are currently 126 active NIH clinical trials where patients are being seen at one of Penn's affiliated hospitals. There are 50,174 active research patients participating in these studies.

15. A 15 percent cap on F&A costs would disrupt numerous ongoing clinical trials in cancer treatment, immunotherapy and bone marrow transplant therapy with enrolled patients, including those who have already started but not yet completed treatment. These trials include:

a. 48 ongoing clinical trials with over 12,000 active enrolled subjects at the Penn Cancer Center;

b. An enrolled patient in a kidney transplant and CAR T study who has already begun treatment and is currently awaiting a transplant;

c. 250 patients in a study regarding the impact of immune therapies; and

d. 2,500 patients currently being observed in clinical trials regarding immune health.

16. A 15% F&A cap would also result in immediate harm to active biomedical research with animal subjects, including:

a. Studies using mice to develop therapies for HIV, autoimmune diseases and cancer;

b. Studies using mice aimed at understanding the genes involved in rising rates of heart failure; and

c. Studies aimed at understanding traumatic brain injury and peripheral nerve injury, both of which occur frequently in military and veteran populations.

17. F&A costs are crucial in clinical trials with live subjects. In one of the studies mentioned above, where researchers are developing therapies for HIV, autoimmune disease, and cancer, researchers utilize F&A funds to support 16,000 mice, which includes the cost of 5,333 cages, 11 mice caretakers, 4 cage wash technicians, 3 veterinary technicians, 1 veterinarian, cage equipment costs, feed, bedding, enrichment, water bottles for all animals, and regulatory and facility support.

18. Penn has for decades relied on inclusion of indirect costs in NIH financial assistance awards. And until now, we have been able to rely on the well-established, data-driven process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases.

19. If the 15% across-the-board indirect rate cap goes into effect, Penn's ability to pay employees and researchers would dramatically be reduced, resulting in immediate and widespread

effects on those employees and their families. For example, the staff centrally supporting research and compliance functions (thus contributing to multiple funded projects) are funded by the F&A cost recovery. This includes 529 staff positions. The imposition of the 15% F&A rate will result in a 75% reduction of available resources to support these functions, which may translate into a loss of more than 350 jobs and corresponding loss of support for multiple ongoing research commitments.

20. Additionally, while those individuals who directly support research are one impacted group, the numbers of positions and salaries impacted by indirect cost recovery is much larger. There are currently 2,296 positions included in the facilities portion of indirect costs, and 1,742 in the administrative pool, a total of 4,020 jobs at Penn. The salary dollars supported by these indirect costs are $308,281,340 for fiscal year 2025.

21. The resulting immediate impact will substantially disrupt Penn's ability to continue its life-saving clinical trials and ongoing cancer research. This will impede Penn's initiation of new clinical trials and harm the entire infrastructure that supports our research enterprise. For many of these functions, specialized skills are required for optimal workforce performance, and it will take years to retrain new staff if existing employees exit due to the uncertainty of future funding.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025, in Philadelphia, PA.

/s/ Elizabeth Duggins Peloso

ELIZABETH DUGGINS PELOSO

EXHIBIT 22

DECLARATION OF JENNIFER REXFORD

I, Jennifer Rexford, declare as follows:

1. I am the Provost and the Gordon Y.S. Wu Professor in Engineering and Professor of Computer Science at Princeton University ("Princeton" or the "University") in Princeton, New Jersey. I joined Princeton's Department of Computer Science as a full professor in 2005, became acting chair of computer science in 2013, and was named chair in 2015. I assumed the role of Provost in 2023.

2. I make this declaration in support of Plaintiffs' Complaint and Motion for a Temporary Restraining Order.

3. As Provost, I serve as Princeton's chief academic officer and chief budget officer. I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Princeton University personnel, and could testify thereto.

4. Princeton is a non-profit educational institution, dedicated to research, teaching, and service. The University's longstanding commitment to service is reflected in its informal motto — Princeton in the nation's service and the service of humanity — and exemplified by the extraordinary contributions that our faculty, staff, and students make to society, including through their groundbreaking research. That research is supported by substantial funding from the federal government, including the National Institutes of Health ("NIH").

5. In fiscal year 2024, for example, Princeton's main campus received $252 million of government grant and contract funding, of which $71 million came from NIH. By the end of the fiscal year—which ended on June 30, 2024—Princeton had approximately 254 active NIH-funded awards across the University, many of which were multi-year awards.

6. The funding that Princeton receives from NIH supports research and drives innovation in many critical fields, including:

a. Cancer research

b. Brain and mental health

c. Heart health

d. Child wellbeing

e. Antibiotics and antivirals

f. Autism research

g. Machine learning

h. Genetic engineering (CRISPR)

7. Several of Princeton's many current and pending NIH-funded research initiatives involve collaborations with New Jersey colleges, universities, or research institutes, including Rutgers University, Rutgers Cancer Institute of New Jersey, and Rowan University. Prominent examples include:

a. The Consortium Cancer Center, through which Rutgers Cancer Institute and Princeton University partner to make "impactful scientific discoveries and clinical progress" in the areas of cancer metabolism, genomics, and metastasis. *See* https://cinj.org/about-cinj/consortium-cancer-center.

b. The New Jersey Alliance for Clinical and Translational Science (NJ ACTS), through which Rutgers, Princeton, NJ Institute for Technology (NJIT), and others collaborate to advance "clinical and translational science to develop new therapies and treatments and improve health and health care in New Jersey." *See* https://njacts.rbhs.rutgers.edu/about/.

c. A collaboration between Princeton and Rutgers "to enhance the understanding of mental health disorders through the lens of computational psychiatry." *See* https://pni.princeton.edu/news/2024/princeton-rutgers-collaboration-awarded-16m-research-grant-advance-understanding-mental.

d. A research collaboration between Princeton University and Rutgers New Jersey Medical School to explore using CRISPR-based technology to detect disease.

8. These collaborations promise to deliver on crucial breakthroughs in science intended to benefit the public. At Princeton, the cost of carrying out these projects exceeds the federal dollars committed to them, even including indirect cost recovery. But the recovery of indirect costs at negotiated rates allows Princeton to defray some of the cost associated with such things as:

a. Capital equipment replacement of scientific equipment needed for cutting edge research.

b. Investment in secure data infrastructure to support research, including genomics and other health research.

c. Support for staffing for research data management to make data from research more accessible to the public.

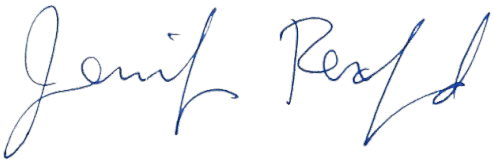
d. Construction and outfitting of specialized facilities for biomedical research, including specialized biological labs that conduct cancer research.

The NIH's proposal to cut indirect cost rates to 15% would have a substantial negative impact on the University's ability to deliver on these important collaborations. The drastic reduction in indirect cost recovery proposed by NIH may hinder the development of certain

research projects, or impede the progress of a broad swath of research efforts. Naturally, there would be effects on employment if staffing, including research-related staffing, was impacted.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 9, 2025 at Princeton, New Jersey.



Jennifer Rexford, Provost

EXHIBIT 23

DECLARATION OF AMY K. DITTMAR

I, Amy K. Dittmar, declare as follows:

1. I am the Provost and Executive Vice President for William Marsh Rice University ("Rice University" or "Rice") in Houston, Texas. I am also a Professor of Finance and Professor of Economics at Rice. I have held these positions since coming to Rice in August 2022. Before joining Rice, I was a faculty member at the University of Michigan in Ann Arbor, Michigan from 2003 to 2022. There, I also served as Senior Vice Provost of Academic and Budgetary Affairs from 2016 to 2022. I hold a Ph.D. in Finance from the University of North Carolina at Chapel Hill.

2. As Rice's Provost and Executive Vice President, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Rice personnel, and could testify thereto.

3. Rice receives substantial annual funding from the National Institutes of Health ("NIH"). For example, in Rice's Fiscal Year 2024, which ran from July 1, 2023, through June 30, 2024, Rice received approximately $43.1 million in NIH grants. Of this amount, approximately $9.3 million came from NIH as reimbursement for Rice's indirect costs. In Rice's Fiscal Year 2025, which runs from July 1, 2024, through June 30, 2025, Rice projects it will receive approximately $20.5 million in NIH grants. Of this amount, approximately $11.6 million will be reimbursement for Rice's indirect costs

4. The funding Rice receives from NIH supports critical and cutting-edge medical research, which millions of Americans benefit from and depend on. For example:

   a. A Rice research team is working to create technologies that help with early detection of cancer and pre-cancerous lesions in the uterine cervix, gastro-

intestinal tract (esophagus, stomach, colon, rectum, anus), and oral cavity. Early detection can improve cancer patients' outcomes and reduce the cost and pain of their treatment, especially in medically underserved areas, including rural areas in the United States.

b. A team of engineers and clinicians from Rice, the University of Texas MD Anderson Cancer Center, and the University of Texas Health Science Center at Houston is working to develop a new and affordable microscope that will give cancer surgeons immediate images in the operating room. This will help cancer patients receive the best surgical care possible and reduce surgical centers' infrastructure costs by hundreds of thousands of dollars, greatly expanding the number of locations that can provide accurate tumor assessments during surgery.

c. Another Rice research team is working to develop a therapeutic "off-the-shelf" cell therapy system that is intended to help treat Acute Respiratory Distress Syndrome (ARDS). ARDS affects over 300,000 Americans annually and has a mortality rate of 43% driven significantly by inflammation, specifically in the one-third of patients with hyperinflammatory ARDS.

d. A different Rice research team is tracking the physical and mental wellbeing (caregiver burden, depression and grief) of a group of spousal caregivers who care for persons with dementia, which in 2020 was estimated to affect more than 7 million people ages 65 or older.

e. Another Rice research team is helping develop a genome-editing based strategy that could be used to treat Sickle Cell Disease, a genetic disease that affects millions of people worldwide and approximately 100,000 Americans.

5. Indirect costs are essential for supporting this research. The NIH's proposal to cut indirect cost rates to 15% would end or seriously jeopardize all of the research projects described in paragraph 4.

6. Indirect costs from NIH help Rice purchase supplies to build and develop the new technology I have described. They also help Rice partly cover the cost of lab space where we actually build and test technology; pay Rice's water and power bills; pay the salaries of people who manage Rice's funding contract with NIH, issue subcontracts to Rice's partners, provide financial reports, maintain safe working conditions by providing hazardous waste disposal; cover the costs of institutional review boards, which ensure that all studies involving humans subjects are conducted ethically; and construct and maintain facilities required to meet the current technical requirements of advanced research.

7. Physical space costs are one of the largest components of indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research that can be done at Rice. NIH research requires lab operation systems that are much more expensive than other parts of the university. For example, labs require more heating, ventilation, and cooling (HVAC) units than do offices. These HVAC units are essential to ensure sterility and manage low and high humidity that can alter scientific test results. Some labs at Rice require limited vibrations due to specialty equipment. Other labs require higher energy costs to power vital

equipment; in general, labs use 5-10 times the energy used by other office buildings.[1] All of these needs are funded, in part, by indirect costs.

8. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH.[2] These mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

9. Recovery of Rice's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

10. Through Rice's fiscal year 2025, its predetermined indirect cost rate is 56.5%.

11. The impact of a reduction in Rice's indirect cost rate would be devastating. Of the approximately $43.1 in NIH funding that Rice received in Rice fiscal year 2024, approximately $25.1 million was allocated for direct costs, approximately $8.6 million for subcontracts (which are not eligible for overhead recovery), and approximately $9.3 million for indirect costs. Similarly, in Rice fiscal year 2025, it expects to receive approximately $20.5 million in NIH funding for direct costs and approximately $11.6 million is allocated for indirect costs. Rice expects to receive similar direct and indirect cost recovery on an annual basis in the future.

[1] https://www.nrel.gov/docs/fy08osti/29413.pdf.
[2] https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf

12. If—contrary to what Rice has negotiated with the federal government—the indirect cost rate is reduced to 15%, that would reduce Rice's anticipated annual indirect cost recovery in Rice fiscal year 2025 by $8.525 million, to $3.075 million.

13. Rice has for decades relied on the payment of indirect costs. And until now, it has been able to rely on the well-established process for negotiating indirect cost rates with the government to inform its budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, research administration staff and environmental health and safety), infrastructure support (*e.g.*, IT networks, regulatory compliance, and cybersecurity), and facility and equipment purchases. And in some cases, Rice has long-term obligations—for example, research lease obligations—that rely on indirect cost recovery to fulfill these commitments.

14. In addition to the immediate impacts and reliance interests described above, there are longer term impacts that are both cumulative and cascading. For example, reductions may cause safety issues from lack of staff and security, threats to research security and national security because of increased data access and theft by malicious actors, and the inability to restart research studies even if funding were restored.

15. Finally, slowdowns or halts in research by Rice and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance.

16. Nor can Rice cover the funding gap itself. While Rice maintains an endowment, it is neither feasible nor sustainable for Rice to exclusively use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

a. A substantial amount of Rice's endowment is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs; or not immediately available because it has been committed through contracts to other purposes. Rice is not legally permitted to use, or timely use, those funds to cover research infrastructure costs.

b. Also, the endowment is subject to a carefully managed annual payout, typically between 4.5% to 6.5%, to ensure Rice's long-term financial stability and continue to fund the Rice Investment, a financial aid program that covers full tuition, fees, and room and board for students whose family income is $75,000 or below; covers full tuition for students whose family income is between $75,000 and $140,000; covers half tuition for students whose family income is between $140,000 and $200,000, assuming typical assets; and meets 100% of demonstrated financial need for students whose families do not fall within those income ranges.

c. As a non-profit university, Rice reinvests nearly all its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, Rice does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

17. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on Rice—which would in turn force reductions in key investments supporting Rice's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain Rice's academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025, at Houston, Texas.

/s/ *Amy K. Dittmar*
AMY K. DITTMAR

EXHIBIT 24

DECLARATION OF STEPHEN DEWHURST, PHD

I, Stephen Dewhurst, PhD, declare as follows:

1. I am the Vice President for Research at University of Rochester ("Rochester" or "University") in Rochester, New York. I have held that position since 2023, after serving as Interim Vice President for Research from 2021 - 2023. I am also Vice Dean for Research at the University's School of Medicine and Dentistry ("SMD"), and since 1990 have been a faculty member in the University of Rochester Medical Center ("Medical Center"), an operating unit of the University.

2. As Vice President for Research, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Rochester personnel, and could testify thereto.

3. The University, as an academic research institution, is our region's largest employer, and seventh-largest employer in New York State, and the University annually invests approximately $137 million in research through the School of Medicine and Dentistry. Many faculty join Rochester's SMD because ours is an academic research and teaching health center, where faculty can practice medicine, perform research, and teach the next generation of medical professionals.

4. The University and Medical Center, together with affiliate and partner hospitals and medical centers across the region, provide medical services to over 3 million people across 27 counties in underserved rural and urban settings—an area with the second highest incidence of cancer in the nation—along with ailments such as Alzheimer's disease and Parkinson's disease, musculoskeletal illnesses and an array of rare and complex diseases such as

neuromuscular diseases, Huntington's disease, cystic fibrosis, Lou Gehrig's disease, autoimmune disorders and more.

5. Rochester receives substantial annual funding from the National Institutes of Health ("NIH"), including approximately $188 million in fiscal year 2023-2024. Such funding has helped spur innovation and discovery over the decades. In fact, for more than 50 years, research conducted at our Wilmot Cancer Institute has led to changes in national oncology standards of care, and paradigm-shifting discoveries, including the science behind the HPV vaccine, which has decreased the incidence of cancers associated with HPV by 40%, saving millions of lives worldwide. In addition:

a. Researchers at the University of Rochester's Center for RNA Biology were the first to describe the process by which faulty messenger RNA (mRNA) molecules are degraded, effectively preventing the production of dysfunctional proteins that cause genetic diseases. This discovery has profound implications for treating genetic disorders, as it offers pathways to modulate this process for therapeutic benefit in settings ranging from Fragile X Syndrome to cancer.

b. Our Wilmot Cancer Institute researchers have described new immunotherapy targets in pancreatic adenocarcinoma as a result of their NIH grant funding, directly leading to first-in-human clinical trials for potential live-saving treatments.

c. Researchers at the University of Rochester developed a cutting edge "tissue-on-a-chip" system funded by NIH grants. This system accelerates the development and regulatory approval of new drugs, allowing testing for efficacy and safety

to be done in micro-culture systems rather than humans at a fraction of the time and cost of conventional methods.

d. Current NIH funded research in our Golisano Childrens' Hospital is leading to new insights into the causes of childhood asthma – which is one of the most common diseases of childhood.

e. Current NIH support for our Intellectual and Developmental Disabilities Research Center (IDDRC) is revealing new information about autism spectrum disorders and rare genetic diseases of childhood, while also informing new treatments and therapeutic interventions.

6. The funding Rochester receives from NIH supports critical and cutting-edge medical research, including research on rare neurologic diseases, autoimmune disease, pulmonary hypertension, pediatric degenerative muscular dystrophy, diabetes, lupus, and autism, all of which promise to benefit millions of Americans. For example, the University's Wilmot Cancer Institute has broad fundamental, translational, and clinical expertise in research on aging and cancer, including recent focus on longevity and mechanisms of cancer development, and has one of the largest and most visible clinical geriatric oncology programs in the USA. URMC has also received substantial NIH funding to support pioneering research focused on understanding the genetic mechanisms and progression of muscular dystrophies, leading to the development of potential RNA-based therapies, now advancing to clinical trials.

7. Indirect costs are essential for supporting this research. The NIH's proposal to cut indirect cost rates to 15% would seriously jeopardize all of the research projects described in paragraphs 5 and 6.

8. Indirect costs include construction and maintenance of laboratory and other research space; maintenance and support for clinical imaging and other scientific research equipment, including several items of NIH-funded equipment valued at over $1 million, which for example actively support research-specific imaging for children and adolescents, as well as DNA-sequencing for cancer research. Indirect costs also support the maintenance and modernization of infrastructure to support laboratories and equipment, including network and compute infrastructure and cybersecurity to protect against malign foreign influence. Wilmot has some of the most advanced cancer research technology in the country and technology is only becoming more complex. Without these resources and equipment, we cannot continue our life-saving research and innovation.

9. Physical space costs are one of the largest components of indirect costs, and the amount and quality of space available to researchers has a direct and obvious impact on the amount of research that can be done at Rochester. NIH indirect costs are critical to the support of:

a. Research into the brain development of children and adolescents, that is critically important to our understanding of ailments such as schizophrenia, childhood neurological diseases, and more. Critical to this are infrastructure resources such as UR CABIN - a 6,000-square-foot state-of-the-art facility for conducting magnetic resonance imaging (MRI) research, which includes an NIH-funded Siemens MAGNETOM Prisma 3T whole-body scanner for human research studies.

b. The University of Rochester's Clinical Research Center, which supports a broad range of NIH funded clinical trials that have led to new therapies for rare

neurologic diseases, autoimmune disease, pulmonary hypertension, pediatric degenerative muscular dystrophy, diabetes, lupus, and autism.

c. High-performance computing resources that enable modeling of RNA structures, and the prediction of novel therapeutic targets, as well as the analysis of complex imaging data from our UR CABIN facility, along with research in a wide array of other areas.

d. Other unique shared resource infrastructure, including Rochester's PEAK lab. PEAK provides resources for integrating human performance measurement, physiology data, biospecimen analysis, and other clinical and biopsychosocial outcomes into clinical and translational cancer control research studies. It provides services such as human performance and physiology assessment, liquid biospecimen processing, and Luminex and ELISA-based biospecimen and biomarker profiling. Space and expertise require funding through indirect cost recovery, and interpretation of human clinical trials for new cancer therapies would be adversely impacted if this lab were closed.

e. Our plans to construct a new cyclotron facility that will address both research initiatives and patient care will be adversely impacted by a major shortfall in NIH indirect costs. This facility would provide a unique resource for imaging of human tumors and other conditions that is not presently available to the 3 million people that our clinical and research enterprise serves.

10. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH.[1] These

[1] https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf

mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity; satisfying public access requirements for research data; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds responsibly and transparently; administering grants; preventing inappropriate access of intellectual property, technologies, or national security expertise by foreign adversaries; complying with NSPM-33 and similar directives relating to malign foreign activities; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

11. Recovery of Rochester's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

12. Through fiscal year 2023, the predetermined indirect cost rate is 54% across the University, including the University of Rochester Medical Center.

13. The impact of a reduction in the indirect cost rate would be devastating. Of the approximately $188 million in NIH funding that Rochester received in fiscal year 2023-2024, approximately $122 million was allocated for direct costs, and approximately $66 million for indirect costs. Similarly, in fiscal year 2024-2025, Rochester would expect to receive a three percent increase, based on historic trends, in the amount of $193 million in NIH funding, which would also include approximately $66 million for indirect costs, and the University has engaged in planning based on these amounts.

14. If—contrary to what Rochester has negotiated with the federal government—the indirect cost rate is reduced to 15%, that would reduce the University's anticipated annual indirect cost recovery by well in excess of $40 million.

15. This reduction will have deeply damaging effects on Rochester's ability to conduct research from day one due to elimination of funding, including the following likely effects:

a. Slowing, pausing or hampering recruitment for NIH clinical trials.

b. Impairing ongoing efforts to recruit top research faculty, as well as top clinicians. As noted elsewhere, faculty (including clinicians) join the University of Rochester Medical Center because it is a leading Academic Health Center, and because it can provide access to cutting-edge research and clinical trials, as well as leading experts in the field.

c. Inability to properly maintain or operate research laboratories and research equipment.

d. Reduction in workforce development, including training the next generation of medical researchers.

e. Undermining our ability to rapidly and efficiently enroll individuals into clinical trials, and undermining our ability to efficiently and rapidly meet federal regulatory compliance requirements, due to loss of administrative funding.

f. Delaying or eliminating construction of planned research facilities, including those partially funded by the University.

16. Rochester has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process of fairly and transparently negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks,

regulatory compliance, and grant management support), and facility and equipment purchases. And in some cases, Rochester has long-term obligations to be satisfied by budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments, such as:

a. Maintaining and paying for long-term service contracts covering major scientific instruments used for imaging for clinical research (e.g., the MRI machines in Rochester's CABIN facility) and other scientific research equipment and infrastructure, such as DNA sequencing equipment that supports human genetic research and studies of the genetic mutations that drive cancer.

b. Maintaining and modernizing physical and digital infrastructures to support laboratory space and equipment.

c. Supporting long-term experiential learning for admitted PhD students representing the future of the U.S. biomedical research workforce.

d. Continuing long-term studies of clinical research cohorts spanning up to 10 years or longer, including support for necessary staff, equipment and infrastructure.

e. Developing and maintaining an information infrastructure that supports current cybersecurity frameworks.

17. In addition to the immediate impacts and reliance interests described above, there are longer term impacts that are both cumulative and cascading.

18. Disruptions to Rochester's research will also have negative effects across Western and Central New York State. As stated above, the University and Medical Center along with affiliates and partners provide critical care to over 3 million individuals across 27 counties, including rural areas with no alternative providers. The Medical Center employs over 3,000

individuals as part of the University's research enterprise. Rochester's research also fuels spending in the regional economy, including by driving discoveries that launch new ventures, attract private investment, and make a positive social and health impact. A massive reduction in Rochester's research budget would immediately and seriously jeopardize these contributions to New York State and would have a negative multiplier effect on the local and regional economy.

19. Nor can Rochester easily cover the funding gap itself, as the University already invests approximately $137 million annually to its research mission through the School of Medicine and Dentistry—an amount that is already imperiled due to pressures associated with reimbursement of clinical care, large increases in staffing costs, changes in the clinical workforce, and other market realities.

20. While Rochester maintains an endowment, it is neither feasible nor sustainable to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

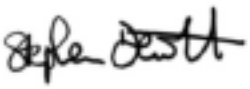
a. A significant portion of Rochester's endowment is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. Rochester is not legally permitted to use those funds to cover research infrastructure costs.

b. As a non-profit institution, Rochester reinvests any minimal revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, Rochester does not generate significant surpluses that could be redirected to research without impacting core academic priorities such as educational programs and financial aid support for students.

21. Moreover, absorbing the financial impact of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on Rochester—which would in turn force reductions in key investments supporting Rochester's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain Rochester's academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025, at Rochester, New York



Stephen Dewhurst

EXHIBIT 25

DECLARATION OF J. MICHAEL GOWER

I, J. Michael Gower, pursuant to 28 U.S.C. § 1746, hereby declare that the following is true and correct:

1. I am the Executive Vice President – Chief Financial Officer & Treasurer at Rutgers, the State University of New Jersey ("Rutgers"). My educational background includes a BA in Political Science and a MBA, each from Duke University. I have been employed as Rutgers's Chief Financial Officer & Treasurer since September 30, 2013. I have been employed as the Chief Financial Officer at two other universities, each with significant research awards from the National Institutes of Health. I also served as the Chief Financial Officer at the Duke University School of Medicine.
2. I submit this Declaration to explain certain impacts on Rutgers resulting from the February 7, 2025, National Institutes of Health ("NIH") Notice Number NOT-OD-25-068, *Supplemental Guidance to the 2024 NIH Grants Policy Statement: Indirect Cost Rates*, ("NIH Supplemental Guidance"). I have compiled the information in the statements set forth below through review of Rutgers's records and other documents gathered by Rutgers personnel who have assisted me and on the basis of documents that have been provided to and/or reviewed by me. I have also familiarized myself with the NIH Supplemental Guidance in order to understand its immediate impact on Rutgers.
3. In addition to providing higher education to students from New Jersey and across the nation, Rutgers also supports significant medical and behavioral research and clinical trials across its colleges and schools. Rutgers conducts vital research across a wide range of areas including heart disease, cancer, neuroscience and brain health, and infectious disease.

4. To fund these crucial medical research programs, Rutgers is the recipient of federal funding, including annual funding from NIH in the total amount of approximately $250 million. NIH funding at Rutgers currently supports nearly 1,200 separate grants and more than 2,400 employees.

5. This funding includes both direct as well as "indirect costs," referred to as Facilities and Administrative costs ("F&A"), which cover expenses including but not limited to research administration, the operation and maintenance of lab facilities, the cost of utilities, maintenance of required regulatory and financial teams and other support staff, and overall operations that enable research institutions to continue to survive.

6. Rutgers's previously-negotiated rate agreement with the U.S. Department of Health and Human Services, for use by most federal agencies, set the rate for F&A costs at 57% of modified total direct costs for on-campus research.

7. On February 7, 2025, through the NIH Supplemental Guidance, NIH informed Rutgers that, effective February 10, 2025, it would be applying a standard indirect (F&A) cost rate of 15% to all grants, including ones already awarded.

8. NIH's reduction of Rutgers's indirect cost rate will eliminate approximately $21.6 million in funding for this fiscal year, ending June 30, 2025. This is critical funding that Rutgers uses to support its research programs. The loss of these funds will have an immediate impact on Rutgers's ability to pay for the upkeep of research facilities, bonds used to construct research facilities, utilities for research facilities, managing payroll, accounting and research administration, and for other infrastructure used to support research.

9. If Rutgers's NIH funding remains at $250 million for next fiscal year, with the decrease in the indirect cost rate from 57% to 15%, Rutgers projects an annual loss of approximately $57.5 million for the fiscal year July 1, 2025, through June 30, 2026.

10. The NIH Supplemental Guidance implementing this significant decrease in the indirect cost rate will have a destabilizing financial impact on how Rutgers advances medical research in support of its patients, communities, and the state of New Jersey, not to mention on the livelihoods of our faculty and staff researchers. For example, the University will not be able to accept or maintain many research awards, thus eliminating entire research initiatives.

11. The decrease in the indirect cost rate will cause significant disruption to Rutgers's operations. Rutgers will need to take extraordinary measures to address and mitigate the loss of funding, including but not limited to layoffs of personnel, the closing of labs, shuttering research buildings, and the cessation of many, if not most, biomedical research programs. Rutgers does not have the resources to fund the indirect costs for our existing NIH grant portfolio at the announced flat rate over an extended period.

12. Included in the NIH-funded projects that would be impacted are those in partnership with other institutions in New Jersey.

    a. That includes the Rutgers Cancer Institute of New Jersey ("CINJ"), a consortium with Princeton University, which is New Jersey's only National Cancer Institute-designated Comprehensive Cancer Center. CINJ conducts groundbreaking cancer research to advance the prevention and treatment of cancer.

    b. That also includes the New Jersey Alliance for Clinical and Translational Science, a partnership among four institutions: Rutgers, Princeton University, the New Jersey Institute of Technology, and RWJBarnabas Health.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed this 9th day of February, 2025, in New Brunswick, NJ.

J. Michael Gower
Executive Vice President – Chief Financial Officer & Treasurer
Rutgers, The State University of New Jersey

EXHIBIT 26

DECLARATION OF WILLIAM WERTHEIM

I, William Wertheim, declare as follows:

1. I am the Executive Vice President of Stony Brook Medicine, which is a component of the State University of New York ("SUNY") at Stony Brook ("SBU") in Stony Brook, New York. I have held that position since June 17, 2023. I also hold the Endowed Chair in Graduate Medical Education at SBU Renaissance School of Medicine.

2. As Executive Vice President, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by SUNY personnel, and could testify thereto.

3. SBU receives substantial annual funding from the National Institutes of Health ("NIH"). This includes a total amount of $80,360,017 over 216 total current grant awards. This results in an indirect cost collection of approximately $27,142,157.

4. The funding SBU receives from NIH supports critical and cutting-edge medical research, which millions of Americans benefit from and depend on. It is no exaggeration to say that NIH grants fund research that saves lives. For example:

   a. NIH grants fund research on Alzheimer's Disease neuropathology in aging 9/11 responders.

   b. NIH grants fund fundamental research for SBU researchers on the biology of cancer, and on novel cancer therapeutic and diagnostic tools, enabling medicine to better identify and treat cancers.

   c. NIH grants support SBU researchers to develop sophisticated diagnostic techniques to identify mental illness, and understand the biology of sleep disorders, allowing earlier and better treatment for people across the country with these problems

d. NIH grants support SBU scientists in understanding how to identify patterns in large data sets and utilize areas of artificial intelligence such as large language models, pattern recognition, and rapid comparison of information with databases to greatly enhance the speed with which diagnostic tests can be resulted and accelerate appropriate treatment for patients with a wide array of different diseases.

5. Indirect costs are essential for supporting this research. The NIH's proposal to cut indirect cost rates to 15% would end or seriously jeopardize all of the research projects described in paragraph 4.

6. Indirect costs fund a range of important tasks and personnel, which includes research equipment and its related maintenance. Without this equipment, we cannot conduct research.

7. For example, with respect to the areas of research described in Paragraph 4:

a. Laboratory science such as that used to understand the biology of cancer, and identify new treatments for cancer, require highly specialized equipment which is both costly to purchase and costly to operate, much more so than routine equipment to treat patients in a clinical setting. Temperature controls are paramount and energy usage for this equipment is much greater and cannot be turned off. For example, tissue samples such as those required for cancer specimens require super-cooled freezers for storage and preservation (i.e., -80 degrees C), which requires both specialized protected areas, highly specialized management, and significant energy utilization.

b. Data science and artificial intelligence tools used as described above also require highly sophisticated computer servers which demand sophisticated technicians to operate and maintain. This too requires high energy utilization, significantly above that which normal computer servers would require.

c. Equipment needed for new treatments and diagnostic studies in mental illness similarly require highly specialized technical skills. For example, diagnostic studies in this area utilize radioisotopes which are manufactured with a cyclotron which is installed in one of our medical research buildings. This level of skill, attention to appropriate protocols, and maintenance is expensive and cannot be performed by individuals without the experience and training in operating these sensitive devices in a safe manner.

8. Physical space costs are one of the largest components of indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research that can be done at SBU. Temperature, sterile environments, cleanliness, maintenance of protection from contamination from routine aerosolized microbes require a higher-than normal level of space, physical controls, and environmental (cleaning and humidity/air temperature) controls. Failure to provide these extra controls for sensitive equipment would both render the equipment unusable and damage the equipment; we would be forced to reduce the research efforts done in these facilities if not discontinue them entirely. Inability to provide the appropriate personnel to operate this machinery would also mean a reduction in schedules or having to cease using these devices. Finally, planned construction for which we have appropriated funds such as our planned Engineering-driven Medicine building would need to be abandoned or limited dramatically as we would not be able to sustain the maintenance, facilities operations, and specialized functions that the equipment needed would demand.

9. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH.[1] These mandates serve many important functions, including protecting human and animal subjects involved

[1] https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf

in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

10. Recovery of SBU's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

11. SBU has, currently, a negotiated rate for indirect costs of 59.5% for on-campus research. Attached hereto as Exhibit A is the Negotiated Indirect Cost Rate Agreement between The Research Foundation for The State University of New York o/b/o Stony Brook University and the U.S. Department of Health & Human Services.

12. The impact of a reduction in the indirect cost rate would be devastating. Taking into account all the NIH grants currently awarded to SBU, we risk losing at least $14.87 million as a result of NIH's 15% cap, including approximately $6.1 million it will incur to support vital research in the next five months. In Fiscal Year 2026 through the end of each of the current NIH awards, another $8.74 million is also at risk. This is almost certainly an undercount of potential losses, as most SBU grants are awarded in yearly installments, and these figures count only the current active yearly installment.

13. This reduction will have deeply damaging effects on SBU's ability to conduct research from day one. Most critically, it will necessarily and immediately in staffing reductions across the board. For example:

a. Our Office of Research and Innovation would have to sharply reduce the number of personnel charged with ensuring compliance with research rules. They would also need to curtail their activity in protecting the privacy of research data.

b. SBU operates many shared research resources which allow multiple investigators to use the same resources while limiting the costs to the University and NIH at large. However, those resources—such as a cryo-Electron Microscopy facility, or our 'Freezer Farm' which provides –80 degree storage of biologic specimens—would lose the personnel and the maintenance of physical facilities which allow them to function. This would mean we would need to close or curtail the use of these facilities and leave researchers unable to carry out studies. This would directly lead to a reduction of science which improves people's lives and reduces the burden of disease in our society.

14. SBU has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. And in some cases, SBU has long-term obligations—for example, the training of future scientists during their Ph.D. programs or as post-doctoral fellows, the salaries of tenured faculty (all faculty are expected to recoup some of their salary from grant support to incentive robust efforts in investigative science by the faculty), and it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments.

15. In addition to the immediate impacts and reliance interests described above, there are longer term impacts that are both cumulative and cascading. The need to curtail research because of the reduction of services actively discourages students from pursuing science careers, which means long-term harm to the science effort in our country. Highly specialized technicians needed to operate

the equipment needed for research turn to other careers or other locales and are extremely difficult to woo back.

16. Disruptions to SBU's research will also have negative effects in the Stony Brook, NY and Long Island areas, the state of New York, and the broader region. Fourteen thousand New York residents are directly employed by Stony Brook Medicine across all its areas of research, education, and clinical care—and it collaborates with state and local partners to help solve regional challenges through joint research and innovation. SBU's research also fuels spending in the regional economy, including by driving discoveries that launch new ventures, attract private investment, and make a positive social impact. A massive reduction in SBU's research budget would immediately and seriously jeopardize these contributions to the local region.

17. Finally, slowdowns or halts in research by SBU and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance.

18. Nor can SBU cover the funding gap itself. While SBU maintains an endowment, it is neither feasible nor sustainable for SBU to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

a. The majority of SBU's endowment is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. SBU is not legally permitted to use those funds to cover research infrastructure costs.

b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout to ensure long-term financial stability for the institution.

c. As a public institution, SBU reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, SBU does not generate significant surpluses that

could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

19. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on SBU—which would in turn force reductions in key investments supporting SBU's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain SBU's academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on the 9th day of February, at Huntington, New York.

/s/ William Wertheim
William Wertheim

EXHIBIT A

COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 1146013200F7
ORGANIZATION:
RFSUNY and SUNY at Stony Brook
35 State Street
Albany, NY 12207-2826

Date: 04/15/2024
FILING REF.: The preceding agreement was dated 04/27/2023

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: INDIRECT COST RATES

RATE TYPES: FIXED FINAL PROV. (PROVISIONAL) PRED. (PREDETERMINED)

TYPE	EFFECTIVE PERIOD FROM	TO	RATE(%)	LOCATION	APPLICABLE TO
PROV.	07/01/2023	Until Amended	59.50	On-Campus	Research
PROV.	07/01/2023	Until Amended	26.00	Off-Campus	Research
PROV.	07/01/2023	Until Amended	62.50	On-Campus	Research DOD Contract
PROV.	07/01/2023	Until Amended	29.00	Off-Campus	Research DOD Contract
PROV.	07/01/2023	Until Amended	52.00	On-Campus	Instruction
PROV.	07/01/2023	Until Amended	26.00	Off-Campus	Instruction
PROV.	07/01/2023	Until Amended	42.00	On-Campus	Other Sponsored Programs
PROV.	07/01/2023	Until Amended	26.00	Off-Campus	Other Sponsored Programs
PROV.	07/01/2023	Until Amended	9.00	All	IPA (A)

*BASE

Modified total direct costs, consisting of all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel and up to the first $25,000 of each subaward (regardless of the period of performance of the subawards under the award). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of $25,000. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs, and with the approval of the cognizant agency for indirect costs.

(A) See Special Remarks (6)

ORGANIZATION: RFSUNY and SUNY at Stony Brook
AGREEMENT DATE: 04/15/2024

SECTION I: FRINGE BENEFIT RATES**

TYPE	FROM	TO	RATE(%)	LOCATION	APPLICABLE TO
FIXED	7/1/2023	6/30/2024	40.00	All	Regular Employees
FIXED	7/1/2023	6/30/2024	28.00	All	Post Doctorals
FIXED	7/1/2023	6/30/2024	14.00	All	Summer Employees
FIXED	7/1/2023	6/30/2024	13.00	All	Graduate Students
FIXED	7/1/2023	6/30/2024	6.00	All	Undergraduate Student
FIXED	7/1/2024	6/30/2025	39.50	All	Regular Employees
FIXED	7/1/2024	6/30/2025	31.00	All	Post Doctorals
FIXED	7/1/2024	6/30/2025	14.00	All	Summer Employees
FIXED	7/1/2024	6/30/2025	13.00	All	Graduate Students
FIXED	7/1/2024	6/30/2025	5.50	All	Undergraduate Student
PROV.	7/1/2025	6/30/2028	39.50	All	Regular Employees
PROV.	7/1/2025	6/30/2028	33.00	All	Post Doctorals
PROV.	7/1/2025	6/30/2028	14.50	All	Summer Employees
PROV.	7/1/2025	6/30/2028	13.50	All	Graduate Students
PROV.	7/1/2025	6/30/2028	5.50	All	Undergraduate Student

** DESCRIPTION OF FRINGE BENEFITS RATE BASE:

Salaries and wages.

SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:
The fringe benefits are charged using the rate(s) listed in the Fringe Benefits Section of this Agreement. The fringe benefits included in the rate(s) are listed below.

1. These Facilities and Administrative cost rates apply when grants and contracts are awarded jointly to Research Foundation for SUNY and SUNY at Stonybrook.

2. OFF-CAMPUS DEFINITION: For all activities performed in facilities not owned or leased by the institution or to which rent is directly allocated to the project(s), the off-campus rate will apply. Grants or contracts will not be subject to more than one Facilities and Administrative cost rate. If more than 50% of a project is performed off-campus, the off-campus rate will apply to the entire project.

3. The fringe benefit costs listed below are reimbursed to the grantee through the direct fringe benefit rates applicable to Research Foundation employees: Retiree Health Insurance, Retirement Expense, Social Security, NYS Unemployment Insurance, NYS Disability Insurance, Group Health Insurance, Group Life Insurance, Long Term Disability Insurance, Workers' Compensation, Dental Insurance, Vacation & Sick Leave*, and Vision Benefits.

*This component consists of payments for accrued unused vacation leave made in accordance with the Research Foundation Leave Policy to employees who have terminated, changed accruing status, or transferred. It also includes payments for absences over 30 calendar-days that are charged to sick leave.

The fringe benefit costs for State University of New York employees are charged utilizing the New York State fringe benefit rate for federal funds. This approved rate is contained in the New York State-Wide Cost Allocation Plan. This rate includes the following costs: Social Security, Retirement, Health Insurance, Unemployment Benefits, Workers' Compensation, Survivors' Benefits, Dental Insurance, Employee Benefit Funds, and Vision Benefits.

4. Equipment means tangible personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds $5,000.

5. Treatment of Paid Absences: *Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims for the cost of these paid absences are not made.

6. This rate applies to positions covered under the Intergovernmental Personnel Act (IPA) Mobility Program. This rate includes the applicable administrative costs only.

7. The one year rate extension of the indirect cost rate was granted in accordance with the OMB Memorandum M-20-17.

8. Your next IDC proposal based on actual costs for the fiscal year ending 06/30/2022 is due in our office by 12/31/2022 (proposal in-house), and your next FB proposal based on actual costs for the fiscal year ending 06/30/2024 is due in our office by 12/31/2024.

9. This rate agreement updates the fringe benefit rates only.

ORGANIZATION: RFSUNY and SUNY at Stony Brook
AGREEMENT DATE: 04/15/2024

SECTION III: GENERAL

A. LIMITATIONS:

The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its indirect cost pool as finally accepted: such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as indirect costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:

This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from indirect to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:

If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:

The rates in this Agreement were approved in accordance with the authority in Title 2 of the Code of Federal Regulations, Part 200 (2 CFR 200), and should be applied to grants, contracts and other agreements covered by 2 CFR 200, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. OTHER:

If any Federal contract, grant or other agreement is reimbursing indirect costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected programs, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of indirect costs allocable to these programs.

BY THE INSTITUTION:

RFSUNY and SUNY at Stony Brook
(INSTITUTION)

DocuSigned by:
David Martin
C8FC256F18C2403...
(SIGNATURE)

David Martin
(NAME)

Associate Director of Cost Accounting
(TITLE)

6/11/2024
(DATE)

ON BEHALF OF THE GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES
(AGENCY)

Darryl W. Mayes -S
Digitally signed by Darryl W. Mayes -S
Date: 2024.06.07 15:09:16 -04'00'
(SIGNATURE)

Darryl W. Mayes
(NAME)

Deputy Director, Cost Allocation Services
(TITLE)

04/15/2024
(DATE)

HHS REPRESENTATIVE: Ryan McCarthy
TELEPHONE: (212) 264-2069

Components of Published Facilities & Administrative Cost Rate

Institution : RFSUNY and SUNY at Stony Brook

FY Covered by Rate:	**7/1/19-**
Rate type: Predetermined	**06/30/23**

Rate Component		
1. Depreciation - Bldgs & Improvements	**5.2%**	
2. Depreciation - Equipment	**3.0%**	
3. Operation & Maintenance	**19.4%**	
4. Interest	**3.0%**	
5. Library	**1.6%**	
6. General Administration	**0.0%**	*
7. Departmental Administration	**26.0%**	*
8. Sponsored Funds Administration	**0.0%**	*
9. Utility Cost Adjustment	**1.3%**	
Published On-Campus Rate- Research	**59.5%**	

*** Reflects provisions of Appendix III to Part 200 of Uniform Guida Costs Identification and Assignment, and Rate Determination for Education (IHEs), C.8. dated December 26, 2013.**

DocuSigned by:
Chris Wade
18AE92672369483...

Name

Title Senior Director Cost Accounting and Procurement

Date 6/23/2020

Components of Published Facilities & Administrative Cost Rate

Institution : RFSUNY and SUNY at Stony Brook

FY Covered by Rate:	**7/1/19-**	
Rate type: Predetermined	**06/30/23**	
Rate Component		
1. Depreciation - Bldgs & Improvements	**0.0%**	
2. Depreciation - Equipment	**0.0%**	
3. Operation & Maintenance	**0.0%**	
4. Interest	**0.0%**	
5. Library	**0.0%**	
6. General Administration	**0.0%**	*
7. Departmental Administration	**26.0%**	*
8. Sponsored Funds Administration	**0.0%**	*
9. Utility Cost Adjustment	**0.0%**	
Published Off-Campus Rate - Research	**26.0%**	

*** Reflects provisions of Appendix III to Part 200 of Uniform Guidance - Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Institutions of Higher Education (IHEs), C.8. dated December 26, 2013.**

DocuSigned by:
Chris Wade
18AE92672369483...

Name

Senior Director Cost Accounting and Procurement

Title

6/23/2020

Date

Components of Published Facilities & Administrative Cost Rate

Institution : RFSUNY and SUNY at Stony Brook

FY Covered by Rate:	**7/1/19-**	
Rate type: Predetermined	**06/30/23**	
Rate Component		
1. Depreciation - Bldgs & Improvements	**5.2%**	
2. Depreciation - Equipment	**3.0%**	
3. Operation & Maintenance	**19.4%**	
4. Interest	**3.0%**	
5. Library	**1.6%**	
6. General Administration	**10.3%**	*
7. Departmental Administration	**11.0%**	*
8. Sponsored Funds Administration	**7.7%**	*
9. Utility Cost Adjustment	**1.3%**	
Published On-Campus Rate- Research DOD	**62.5%**	

*** Reflects provisions of Appendix III to Part 200 of Uniform Guidance - Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Institutions of Higher Education (IHEs), C.8. dated December 26, 2013.**

DocuSigned by:
Chris Wade
18AE92672369483...

Name

Senior Director Cost Accounting and Procurement

Title

6/23/2020

Date

Components of Published Facilities & Administrative Cost Rate

Institution : RFSUNY and SUNY at Stony Brook

FY Covered by Rate:	**7/1/19-**	
Rate type: Predetermined	**06/30/23**	
Rate Component		
1. Depreciation - Bldgs & Improvements	**0.0%**	
2. Depreciation - Equipment	**0.0%**	
3. Operation & Maintenance	**0.0%**	
4. Interest	**0.0%**	
5. Library	**0.0%**	
6. General Administration	**10.3%**	*
7. Departmental Administration	**11.0%**	*
8. Sponsored Funds Administration	**7.7%**	*
9. Utility Cost Adjustment	**0.0%**	
Published Off-Campus Rate- Research DOD	**29.0%**	

*** Reflects provisions of Appendix III to Part 200 of Uniform Guidance - Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Institutions of Higher Education (IHEs), C.8. dated December 26, 2013.**

DocuSigned by:
Chris Wade
18AE92672369483...

Name

Senior Director Cost Accounting and Procurement

Title

6/23/2020

Date

Components of Published Facilities & Administrative Cost Rate

Institution : RFSUNY and SUNY at Stony Brook

FY Covered by Rate:	**7/1/19-**	
Rate type: Predetermined	**06/30/23**	
Rate Component		
1. Depreciation - Bldgs & Improvements	**2.6%**	
2. Depreciation - Equipment	**1.8%**	
3. Operation & Maintenance	**9.2%**	
4. Interest	**0.9%**	
5. Library	**1.5%**	
6. General Administration	**0.0%**	*
7. Departmental Administration	**26.0%**	*
8. Sponsored Funds Administration	**0.0%**	*
9. Student Services	**0.0%**	
Published On-Campus Rate - OSP	**42.0%**	

*** Reflects provisions of Appendix III to Part 200 of Uniform Guidance - Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Institutions of Higher Education (IHEs), C.8. dated December 26, 2013.**

Name DocuSigned by: Chris Wade 18AE92672369483...

Title Senior Director Cost Accounting and Procurement

Date 6/23/2020

Components of Published Facilities & Administrative Cost Rate

Institution : RFSUNY and SUNY at Stony Brook

FY Covered by Rate:	**7/1/19-**	
Rate type: Predetermined	**06/30/23**	
Rate Component		
1. Depreciation - Bldgs & Improvements	**0.0%**	
2. Depreciation - Equipment	**0.0%**	
3. Operation & Maintenance	**0.0%**	
4. Interest	**0.0%**	
5. Library	**0.0%**	
6. General Administration	**0.0%**	*
7. Departmental Administration	**26.0%**	*
8. Sponsored Funds Administration	**0.0%**	*
9. Student Services	**0.0%**	
Published Off-Campus Rate - OSP	**26.0%**	

*** Reflects provisions of Appendix III to Part 200 of Uniform Guidance - Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Institutions of Higher Education (IHEs), C.8. dated December 26, 2013.**

DocuSigned by:
Chris Wade
18AE92672369483...

Name

Senior Director Cost Accounting and Procurement

Title

6/23/2020

Date

Components of Published Facilities & Administrative Cost Rate

Institution : RFSUNY and SUNY at Stony Brook

FY Covered by Rate:	**7/1/19-**	
Rate type: Predetermined	**06/30/23**	
Rate Component		
1. Depreciation - Bldgs & Improvements	**4.3%**	
2. Depreciation - Equipment	**0.6%**	
3. Operation & Maintenance	**12.0%**	
4. Interest	**1.6%**	
5. Library	**7.5%**	
6. General Administration	**0.0%**	*
7. Departmental Administration	**26.0%**	*
8. Sponsored Funds Administration	**0.0%**	*
9. Student Services	**0.0%**	
Published On-Campus Rate- Instruction	**52.0%**	

*** Reflects provisions of Appendix III to Part 200 of Uniform Guidance - Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Institutions of Higher Education (IHEs), C.8. dated December 26, 2013.**

Name DocuSigned by: Chris Wade 18AE92672369483...

Title Senior Director Cost Accounting and Procurement

Date 6/23/2020

Components of Published Facilities & Administrative Cost Rate

Institution : RFSUNY and SUNY at Stony Brook

FY Covered by Rate:	**7/1/19-**	
Rate type: Predetermined	**06/30/23**	
Rate Component		
1. Depreciation - Bldgs & Improvements	**0.0%**	
2. Depreciation - Equipment	**0.0%**	
3. Operation & Maintenance	**0.0%**	
4. Interest	**0.0%**	
5. Library	**0.0%**	
6. General Administration	**0.0%**	*
7. Departmental Administration	**26.0%**	*
8. Sponsored Funds Administration	**0.0%**	*
9. Student Services	**0.0%**	
Published Off-Campus Rate- Instruction	**26.0%**	

*** Reflects provisions of Appendix III to Part 200 of Uniform Guidance - Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Institutions of Higher Education (IHEs), C.8. dated December 26, 2013.**

DocuSigned by:
Chris Wade
18AE92672369483...

Name

Senior Director Cost Accounting and Procurement

Title

6/23/2020

Date

Components of Published Facilities & Administrative Cost Ra

Institution : RFSUNY and SUNY at Stony Brook

FY Covered by Rate:	**7/1/19-**
Rate type: Predetermined	**06/30/23**

Rate Component		
1. Depreciation - Bldgs & Improvement	**0.0%**	
2. Depreciation - Equipment	**0.0%**	
3. Operation & Maintenance	**0.0%**	
4. Interest	**0.0%**	
5. Library	**0.0%**	
6. General Administration	**1.4%**	*
7. Departmental Administration	**0.0%**	*
8. Sponsored Funds Administration	**7.6%**	*
9. Student Services	**0.0%**	
Published Rate - IPA	**9.0%**	

*** Reflects provisions of Appendix III to Part 200 of Uniform G Costs Identification and Assignment, and Rate Determinatior Education (IHEs), C.8. dated December 26, 2013.**

DocuSigned by:
Chris Wade
18AE92672369483...

Name

Senior Director Cost Accounting and Procurement

Title

6/23/2020

Date

EXHIBIT 27

DECLARATION OF BERNARD ARULANANDAM

I, Bernard Arulanandam, declare as follows:

1. I am the Vice Provost for Research at the Trustees of Tufts College ("Tufts University" or "Tufts") in Boston, Massachusetts. I have held that position since July 2022. Before that, I oversaw research, economic development and knowledge enterprise work at the University of Texas, San Antonio. As an NIH-funded researcher for over 25 years, I can attest to the crucial role of indirect funds in supporting the infrastructure and systems at universities, which go beyond the direct costs associated with research itself.

2. As the Vice Provost for Research, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Tufts University personnel, and could testify thereto.

3. Tufts University receives substantial annual funding from the National Institutes of Health ("NIH"). As of fiscal year 2025, Tufts University is currently receiving $115.2 million in NIH funds, including $88.3 million in direct costs and $26.9 million in indirect costs. This funding is used to support over 200 projects across the University.

4. The Tufts University Health Sciences campuses bring together the resources and activities of Tufts University's Schools of Medicine, Dentistry, Graduate Biomedical Sciences, and the Friedman School of Nutrition Science and Policy. These nationally recognized institutions depend on NIH support to conduct vital, cutting-edge medical research that benefits millions of Americans. Notably, three of the largest and most impactful NIH-funded projects at Tufts include:

a. Tufts University Clinical and Translational Science Institute (CTSI), one of 60 NIH National Clinical and Translational Science Award (CTSA) hubs at leading US medical research

centers, accelerates translation of biomedical research into impact on patient care and public health. It does this by providing education, research facilities, biostatistics and study design consultation, informatics support, and many other resources. Tufts CTSI has been a national leader in research education, innovations in research design, testing treatments in real-world care, and engaging all stakeholders in the research process, across institutions and disciplines. Since its start in 2008, across New England academic and clinical institutions, Tufts CTSI has provided expert consultations to over 13,000 researchers, supported training of over 100 students and fellows, supported careers of over 30 junior faculty, and has provided research training resources nationally.

b. The Tufts University Center for Integrated Management of Antimicrobial Resistance (CIMAR) is conducting research to protect humanity from the global threat of antimicrobial resistance or "superbugs". Tufts is studying how drug-resistant microorganisms are outpacing the efficacy of modern medicine (antibiotics, antivirals and anti-parasitics) and threatening to return us to an era when life-threatening infectious diseases like tuberculosis or pneumonia were a death sentence. This NIH-funded research prioritizes stopping the spread of drug-resistant microorganisms by studying relationships among people, animals, environments and food sources.

c. Tufts is also actively researching other forms of vector borne infectious disease, including a longitudinal study of chronic Lyme disease, a tick-borne illness that can result in prolonged and debilitating symptoms in some patients. This NIH-funded study will enroll patients with acute Lyme disease from rural and suburban community health centers over a 5-year period to study the cause, prevention and eventual cure of Lyme disease. As an added benefit, this study

will create one of the world's largest specimen banks for the future study of post-infection syndromes beyond Lyme disease.

5. Indirect costs are essential for supporting this research. The NIH's proposal to cut indirect cost rates to 15% would end or seriously jeopardize all of the research projects described in paragraph 4.

6. Indirect costs include funds to cover Tufts' basic research infrastructure and equipment, including biocontainment laboratories, other bench research facilities, fume hoods, autoclaves, high-speed data processing, security and data storage for sensitive health information, and refrigeration for specimen storage.

7. Physical space costs are one of the largest components of indirect costs, and the facilities available to researchers have a direct and obvious impact on the research that can be done at Tufts. For example, Tufts operates the New England Regional Biosafety Laboratory (RBL), which is a 41,000-square-foot facility dedicated to the study of existing and emerging infectious diseases, toxin-mediated diseases, and medical countermeasures important to biodefense. The RBL provides a safe environment for researchers to conduct studies aimed at developing therapeutics, vaccines, and diagnostic tools. The facility offers Biosafety Level 2 (BSL-2) and Biosafety Level 3 (BSL-3) laboratory suites, an Animal Biosafety Level 3 (ABSL-3) vivarium, and an aerobiology suite. These resources support research on pathogens that may cause serious or potentially lethal diseases through inhalation and are dependent on NIH indirect funding for infrastructure and equipment sustainment, life safety and compliance measures, and technical expertise to support research.

8. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH.[1] These mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity and compliance; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

9. Recovery of the University's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

10. If—contrary to what Tufts has negotiated with the federal government—the indirect cost rate is reduced to 15%, that would significantly reduce the University's anticipated annual indirect cost recovery. Tufts' fiscal year 2026 budget assumes federal grant funding in line with the current fiscal year. The University's preliminary estimates suggest that a cap of 15% on indirect costs on awards from the Department of Health and Human Services (DHHS) would result in an estimated budget shortfall of $20 million. Tufts expects this reduction to have the greatest impact on its Boston Health Sciences Campus, which includes Tufts University School of Medicine (TUSM), Tufts University School of Dental Medicine (TUSDM), the Tufts University Graduate School of Biomedical Sciences (GSBS), and the Tufts University Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy, all of which rely on NIH funding to support their research work and educational programs. However, the impact will be felt deeply across the entire university.

[1] https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf

11. Tufts secured grant awards with a higher indirect cost rate and structured its financial planning and hiring decisions based on the expectation of sustaining that funding throughout the life of the grants. This reduction will have deeply damaging effects on the University's ability to conduct research from day one. Most critically, we expect it would immediately result in staffing reductions across the board. For example:

a. It will result in staffing reductions, hiring freezes, and potential layoffs affecting essential research support staff responsible for financial management, administration, compliance, safety, and other critical research facility functions, significantly impacting research operations and support services. Hiring freezes or staff reductions will result in reduced capacity and increased delay in safety monitoring/training, including oversight of hazardous materials (e.g., radiation, chemicals, biologicals), shipping of restricted items, oversight and review of clinical trials and other human subject research. Without appropriate funding for indirect costs, the University would have a reduced ability to secure and manage intellectual property and sensitive data from foreign adversaries due to reduced funds to ensure appropriate data storage, internet, telecommunications, and high-speed computing and data processing. Cuts to administrative, technical, and research support staff, will also lead to delays in grant management, compliance, and essential services.

b. Immediate decisions will also be necessary concerning longer-term investments of University funds. For example, to the extent the University funds may be diverted to continue appropriate levels of research support now covered by indirect costs, Tufts will no longer have the funding to provide start-up funds to new researchers and seed support to allow for growth of new laboratory capabilities. The number of new-internally funded projects and the overall number of laboratories will need to be reduced.

13. Tufts has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management and intellectual property support), and facility and equipment purchases. And in some cases, Tufts has long-term obligations—including tenured faculty salaries and already-admitted PhD students—and it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments.

14. In addition to the immediate impacts and reliance interests outlined above, there are significant long-term effects that are both cumulative and cascading. A decline in research activity will affect a wide range of businesses that support the physical research infrastructure at Tufts, from construction and maintenance services to specialized repair contractors. Similarly, the reduced demand for research supplies is an obvious consequence.

15. According to the Biotechnology Innovation Organization (BIO), the federal Bayh-Dole Act—which mandates that universities commercialize inventions arising from federally funded research—contributed up to $1.9 trillion to the U.S. gross domestic product and supported as many as 6.5 million jobs between 1996 and 2020. A reduction in federal funding opportunities threatens to weaken this critical economic engine.

16. According to the Tufts University 2024 Economic and Community Impact Report, Tufts generated $112.1 million in tax revenue and supported 12,904 jobs in New England in 2023. Disruptions to the University's research funding, such as an indirect cost rate reduction to 15%, would directly result in reduced tax revenue and employment opportunities at the local and

state level, with downstream impacts on the number of doctors (medicine, dental and veterinary) that are trained and deployed into the U.S. healthcare system. The jobs supported by Tufts research include more than scientists in white coats, they include animal handlers, nurses, dental technicians, and nutritionists.

17. Finally, slowdowns or halts in research by Tufts and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance. A reduced ability to cover indirect costs could also impact the U.S.'s ability to respond to health crises, threatening national security and diminishing leadership in global health issues like vaccines and medical devices.

18. Nor can Tufts cover the funding gap itself. While Tufts maintains an endowment, it is neither feasible nor sustainable for Tufts to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

a. Much of the University's endowment is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. Tufts is not legally permitted to use those funds to cover research infrastructure costs.

b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout to ensure long-term financial stability for the institution.

c. As a non-profit institution, Tufts reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, Tufts does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

19. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on the University—which would in turn force reductions in key investments supporting Tufts' faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain Tufts's academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025, at 75 Kneeland Street, Boston, Massachusetts.

/s/ Bernard Arulanandam
BERNARD ARULANANDAM

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EXHIBIT 28

DECLARATION OF ISHWAR K. PURI

I, Ishwar K. Puri, declare as follows:

1. I am the Senior Vice President of Research and Innovation, and Professor of Aerospace and Mechanical Engineering, at the University of Southern California ("USC" or "University") in Los Angeles, California. I have served as USC's head of research since 2021.

2. As USC's Senior Vice President of Research and Innovation, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by USC personnel, and could testify thereto.

3. USC receives substantial annual funding from the National Institutes of Health ("NIH"). In FY24, USC received over 1,868 NIH awards, totaling $456.5M, of which $233.9M was for direct costs, $96.7M for subcontracts (which are not eligible for overhead recovery), and $125.8M for indirect costs.

4. The funding USC receives from NIH supports critical and cutting-edge medical research, which millions of Americans benefit from and depend on. For example:

   a. **Aging and Alzheimer's disease**: The funding that USC receives from the National Institutes of Aging supports multiple USC research centers dedicated to aging and Alzheimer's disease, including the USC Alzheimer's Disease Research Center, the USC/UCLA Center on Biodemography and Population Health, and the Alzheimer's Clinical Trials Consortium, amongst others. These research centers drive groundbreaking discoveries in neurodegeneration, prevention, and treatment, and are critical to the health of the American people as they help address the growing public health (and national economic) challenge of Alzheimer's and age-related diseases, improving early diagnosis,

developing innovative therapies, and shaping policies for better care and support.

b. **Cancer**: Funding that USC receives from the National Cancer Institute supports the USC Norris Comprehensive Cancer Center, which conducts groundbreaking research on cancer prevention, treatment, and survivorship while providing cutting-edge clinical care. USC's research in this area advances precision medicine, innovative therapies, and community outreach programs, ultimately improving cancer outcomes and improving the lives of the American people. Funding for cancer has also been pivotal in understanding biological mechanisms necessary for the pharmaceutical industry to generate curative therapy.

c. **Translational Research**: USC is home to the National Center for Advancing Translational Sciences-funded Southern California Clinical and Translational Science Institute, which accelerates the translation of scientific discoveries into real-world health solutions by supporting interdisciplinary research, clinical trials, and community engagement. This critical work accelerates the development of new treatments, medical technologies, and public health interventions from laboratory discoveries to real-world applications, bridging the gap between research and patient care and improving disease prevention and treatment amongst the American population.

d. **Neuroscience**: USC is a key contributor to the NIH-funded Brain Research Through Advancing Innovative Neurotechnologies (BRAIN) Initiative and is home to the National Institute of Neurological Disorders and Stroke-funded

Zilkha Neurogenetic Institute and the Stroke Preclinical Assessment Network Coordinating Center. This work is critical to the health and lives of the American people as it advances the understanding, prevention, and treatment of neurological disorders such as stroke, Parkinson's disease, and Alzheimer's, with the goal of enhancing quality of life, and reducing the burden of neurological diseases nationwide.

e. **Blindness:** NIH-funded research at USC has supported the use of a variety of state-of-the-art techniques, including gene therapy, electric currents, and other novel approaches best discovered at universities, to prevent and possibly reverse blindness of acute macular degeneration and other diseases leading to loss of vision.

5. Indirect costs are essential for supporting this research. The NIH's proposal to cut indirect cost rates to 15% would seriously jeopardize all of the research projects described in paragraph 4.

6. Indirect costs support an extensive, comprehensive suite of equipment and facilities at USC that is relied upon by the institution's researchers to remain at the forefront of medical discovery. These advanced core and shared research facilities include the following resources (further description provided in paragraph **7.a.i.**): 4D Quantitative Imaging, Aging Biomarker and Service Core, Bioreagent and Cell Culture Core, Biostatistics Core CHLA, Biostatistics Core NCCC, Biostatistics Core SC CTSI, Cell and Tissue Imaging Core, Cellular Imaging Core, Center for Quantum Information Science & Technology, Chang Stem Cell Engineering Facility, Chemistry Instrumentation, Circulating Tumor Cells Research Core, Citavi, Clinical Research, Clinical Trials Unit, Cognitive Neuroimaging Center, Core Center of Excellence in Nano Imaging,

Data Science Core, Department of Animal Resources, Diabetes and Obesity Research Institute Clinical Services Core, Diabetes and Obesity Research Institute Metaboli, Assay Core, Dimensions, Flow Cytometry Core Facility, Functional Biological Imaging Core, Gene Targeting & Pathology Core, Good Manufacturing Practice Core, GrantForward, High Performance Computing Center, Histology Laboratory, Image Processing and Informatics Lab, Immune Monitoring Core, Information Technology Services, Integrative Liver Cell Core, John O'Brian Nanofabrication Laboratory, Lentiviral Core Laboratory, Machine Shop Facilities, Molecular Genomics / DNA Oligo Synthesis, Mass Spectrometry Core, Molecular and Cell Biology Support Core, Molecular Genomics / DNA Sequencing, Molecular Genomics / Genomics and Arrays, Molecular Genomics/Microarray, Molecular Imaging Center – Small Animal Imaging, MOSIS Very Large Scale Integration Circuit Fabrication, Multi-Photon Microscopy Core, Nanobiophysics Core, NCCC Bioinformatics Core, Neuroplasticity and Imaging, Norris Library Bioinformatics Support, NubiS, Optical Imaging Facility, Philanthropy News Digest, Proteomics Core, Research Imaging Core at the Saban Research Institute, SC CTSI-Southern California Clinical and Translational Science Institute, Schaeffer Center Data Core, Seahorse Core Facility Gerontology, Shoah Foundation, Spatial Sciences Institute, Structural Biology Center, Transgenic/ Knockout Rodent Core Facility, Translational Imaging Center, Translational Pathology Facility – Adult Tissue Arm, Translational Pathology Facility – Slides & Soft Tissue, Translational Research Laboratory, Understanding America Study, USC Center of Excellence for Molecular Characterization, USC Digital Repository, USC Genome Core, USC Libraries Bioinformatics Support, Vector Core, Video Tracking Core, X-Ray Crystallography Facility. These facilities and equipment are vitally needed to support our research in these areas.

7. For example, with respect to the areas of research described in Paragraph 4:

a. **Aging and Alzheimer's disease** research requires state-of-the-art facilities and equipment, such as advanced neuroimaging, biomarker analysis labs, and high-performance computing for big data analysis. USC operates and maintains **state-of-the-art research facilities** that support Alzheimer's disease research, including the **USC Alzheimer's Therapeutic Research Institute**, which leads clinical trials, the **Mark and Mary Stevens Neuroimaging and Informatics Institute**, which pioneers advanced brain imaging and data science, and the **USC Michelson Center for Convergent Bioscience**, which fosters interdisciplinary collaborations to accelerate breakthroughs in neurodegenerative disease treatment.

i. In addition to these significant facilities, USC provides researchers with access to advanced core and shared research facilities, including state-of-the-art imaging equipment, biostatistics support, a vivarium supporting animal studies, powerful computing centers, and cutting-edge genomics and proteomics technology. These facilities include: **4D Quantitative Imaging Lab** - provides state-of-the-art digital image processing and quantitation; **Aging Biomarker and Service Core** - QuickPlex SQ 120 (Meso Scale Discovery, MSD) and SpectraMax M3 multi-mode microplate readers (Molecular Device); **Bioreagent and Cell Culture Core -** supports cancer-related research that requires in vitro experiments, provides reagents for cell culture, and prepares bioreagents that are produced by cells grown in the Core; **Biostatistics**

Core CHLA – assists researchers with the design and analysis of clinical and laboratory studies, including formulation of research questions, IRB and grant applications, sample size and power estimation, data management and forms development, statistical analysis, manuscript preparation and publication; **Biostatistics Core NCCC** – provides statistical support to clinical and basic science cancer-related research, working with members of the Clinical Investigations Support Office on in-house clinical trials; **Biostatistics Core SC CTSI -** provides high quality, easy-to-access biostatistics service and guidance to investigator-initiated clinical studies and trials from concept to close-out; **Cell and Tissue Imaging Core -** provides tissue processing, thin sectioning, embedding, cryosectioning, immunostaining, paraffin embedding, digital photomicroscopy, digital slide scanning, SEM imaging, and TEM imaging and computer aided graphics; **Cellular Imaging Core** - houses light microscopy and digital image processing equipment to support cell biology research; **Center for Quantum Information Science & Technology –** provides mentorship for graduate and postdoctoral research, sponsors a robust visiting scholars program, develops and teaches novel QIST-based courses, organizes international conferences and workshops, and hosts regular seminar series; **Chang Stem Cell Engineering Facility -** genetically modifies embryonic stem (ES) cells and induced pluripotent stem (iPS) cell lines; **Chemistry Instrumentation Facility** – provides

proteomics and spectroscopy; **Choi Family Therapeutic Screening Facility** - enables investigators from USC and beyond to improve their understanding of diseases and accelerate the discovery of potential therapeutic drugs; **Circulating Tumor Cells Research Core -** employs a variety of technologies that enrich CTCs for enumeration or molecular characterization; **Citavi** - reference management and note-taking software; **Clinical Research Informatics -** provides services enabling complete access and analysis of patient data from the electronic medical records of Keck Medicine of USC, Children's Hospital of Los Angeles, and the Los Angeles Department of Health Services; **Clinical Trials Unit -** offers a broad range of services for investigators to conduct study visits ranging low complexity to high complexity; **Cognitive Neuroimaging Center -** pursues structural and functional brain imaging studies using state of the art techniques, to contribute to the development of future brain imaging modalities and to disseminate knowledge about the brain, the mind, and neuroimaging; **Core Center of Excellence in Nano Imaging -** provides research tools for imaging, visualization, and analysis of nano-scale features and structures, both man-made and natural, including biological structures; **Data Science Core** - develops and supports databases for laboratory data management, multi-center clinical trials coordination, epidemiologic and prevention studies, as well as disease specific studies; **Department of Animal Resources -** assist faculty in preparing proposals and

carrying out animal-based research and teaching activities at USC; **Diabetes and Obesity Research Institute Clinical Services Core -** provides expert obesity- and diabetes-related clinical services to researchers; **Diabetes and Obesity Research Institute Metabolic Assay Core -** provides assay services to investigators; **Dimensions -** a tool licensed by USC to find and compare research grants, patents, clinical trials, publications, and other metrics by individual, specialty, or university; **Flow Cytometry Core Facility -** provides the research community with the technology to selectively phenotype and sort specific populations of cells; **Functional Biological Imaging Core -** pre-clinical imaging resource at the Zilkha Neurogenetic Institute takes advantage of state-of-the-art preclinical MRI/PET instrumentation; **Gene Targeting & Pathology Core** - provides genetically manipulated mice for biomedical studies; **Good Manufacturing Practice Core –** provides the manufacture of therapeutic grade cell-based products under GMP conditions for use in clinical trials; **GrantForward -** search engine dedicated to helping institutions and individuals find grant opportunities; **High Performance Computing Center -** comprises a diverse mix of computing and data resources, including two Linux clusters (the principal computing resource) as well as a central facility that provides more than 1.4 petabytes of combined disk storage and potential access to nearly a petabyte of tape storage; **Histology Laboratory -** supports all steps to make microscope slides from tissue

samples, processing and embedding, paraffin sectioning, frozen sectioning, H&E staining, and Microm HM310 rotary microtome usage; **Image Processing and Informatics Lab -** utilizes Biomedical Imaging and Informatics Technologies to train and educate scientists and physicians in clinical R&D services related to medical imaging and informatics; **Immune Monitoring Core -** offers advice, technical support and equipment for all immune monitoring needs; **Information Technology Services -** provides information technology and support services to USC researchers; **Integrative Liver Cell Core** - supports center investigators and serves as a national resource by providing critical animal core services and animal models; **John O'Brian Nanofabrication Laboratory** - central user, Class 1000 cleanroom dedicated to supporting the nanofabrication research efforts of USC researchers; **Lentiviral Core Laboratory -** provides services for production of small-scale lentiviral stocks for delivery and expression of transgenes or shRNA of interest; **Machine Shop Facilities -** provides machine work for research in the Viterbi School of Engineering and in the Dornsife College of Letters, Arts and Sciences; **Molecular Genomics / DNA Oligo Synthesis;** provides Oligo DNA Services; **Mass Spectrometry Core -** equipped with state-of-the-art instruments for imaging mass spectrometry (IMS), high-throughput screening, and quantitative metabolomic and proteomics; **Molecular and Cell Biology Support Core -** provides support services to faculty and laboratories at

the Ezralow Tower, the Norris Topping Tower, the Harlyne Norris Research Tower, and the Smith Tower at CHLA; **Molecular Genomics / DNA Sequencing -** : Capillary DNA sequencing; **Molecular Genomics / Genomics and Arrays -** performs high throughput analyses of genetic (polymorphism/mutation) and epigenetic variations (DNA methylation) that underlie predisposition and progression to cancer; **Molecular Genomics/Microarray -** gene expression profiling with a variety of arrays, including human, mouse and rat; mutation analyses (p53); HIV, yeast, and bacterial genome analyses; and SNP analyses; **Molecular Imaging Center – Small Animal Imaging -** focuses on the translational needs of investigators to allow in vivo imaging of disease processes and development of new molecular therapeutics and diagnostics, providing support to research studies of small animals for a variety of applications; **MOSIS Very Large Scale Integration Circuit Fabrication -** provides customers with technologies and manufacturing solutions that span all parts of the production cycle, from small to large-quantity fabrication runs, to packaging and assembly; **Multi-Photon Microscopy Core -** provides in vivo imaging of intact organs in small animals with high temporal and subcellular resolution, ideal for studying (patho)physiological processes in health and disease; **Nanobiophysics Core -** supports faculty and students across the university in the study of molecular nano-assembly, structures and functions; **NCCC Bioinformatics Core**

- offers a range of services to researchers across Norris Cancer Center at USC and other academic institutions on a fee-based or combination of fee- and collaboration-based service; **Neuroplasticity and Imaging** - uses Transcranial Magnetic Stimulation (TMS) to investigate brain-behavior relationships during motor skill learning and motor control in non-disabled and brain-injured individuals; **Norris Library Bioinformatics Support** - Norris Library provides bioinformatics support to Norris Library; **NubiS** - complete data collection tool including all traditional modes of data collection like self-administered, face-to-face, and telephone interviewing; **Optical Imaging Facility** - specializes in cellular and subcellular fixed or dynamic imaging and analysis of biological material; **Philanthropy News Digest** - publishes requests for proposals and notices of awards as a free service for U.S.-based nonprofit and grantmaking organizations; **Proteomics Core** - utilizes proteomics with advanced mass spectrometry to investigate protein functions and roles in disease; **Research Imaging Core at the Saban Research Institute** – full service in vivo imaging laboratory providing non-invasive capabilities for use on mammalian models; **SC CTSI-Southern California Clinical and Translational Science Institute** - multifaceted resource for clinical and community-partnered translational research; **Schaeffer Center Data Core** - comprehensive data library, analytic computing environments, data and programming expertise, and protected data management; **Seahorse Core Facility**

Gerontology - unique instrument that measure extracellular O2, pH, glucose and lactate fluxes to provide estimates of glucose utilization in cultured cells; **Shoah Foundation -** digital Archive and media resources; **Spatial Sciences Institute -** analyze, model, and visualize location-based data; **Structural Biology Center - s**pecially designed to conduct material, and reduced-, large- and full-scale structural testing; **Transgenic/ Knockout Rodent Core Facility -** provides high-quality embryo and stem cell manipulation, microinjection; **Translational Imaging Center -** brings together advanced light and fluorescence microscopy systems, providing facilities and instruments for scientists engaged in translational research; **Translational Pathology Facility – Adult Tissue Arm -** provides a single point of access for tissue procurement and banking services; **Translational Pathology Facility – Slides & Soft Tissue -** provides normal and tumor tissue specimens for laboratory-based, epidemiologic and clinical studies; **Translational Research Laboratory -** provides USC researchers with access to lab resources and technical guidance to promote translational research; **Understanding America Study -** panel of households of approximately 9,400 respondents representing the entire United States; **USC Center of Excellence for Molecular Characterization -** provides information on the number and type of chemical entities in molecules; **USC Digital Repository -** provides fee-based consulting and services to help USC researchers meet grant data management plan requirements; **USC**

Genome Core - offers NextGeneration Sequencing services to all USC researchers; **USC Libraries Bioinformatics Support -** Statistical analysis of high-throughput data and DNA/protein sequence analysis, comprehensive functional analysis and advanced literature and data search and mining, as well as workshops and training of available software tools; **Vector Core -** provides researchers with state-of-the-art technology, facilities, support staff, and services and a broad range of resources; **Video Tracking Core -** facility provides specialized research video services to USC and non-USC researchers; and **X-Ray Crystallography Facility -** structurally characterizes single-crystal samples of organic, inorganic, and organometallic compounds using X-ray diffraction.

b. **Cancer**: USC cancer research is facilitated by the National Cancer Institute-funded **USC Norris Comprehensive Cancer Center**, a state-of-the-art research and treatment facility designed to support cutting-edge cancer care. Additionally, USC cancer researchers have access to all USC core facilities, as enumerated above in paragraph **7.a.i.**

c. **Translational Research**: USC translational research is facilitated by the NIH-funded **USC Clinical and Translational Science Institute,** which operates within a modern research and clinical facility designed to accelerate medical discoveries into real-world treatments. The building features state-of-the-art clinical research spaces, advanced laboratory facilities, and collaborative

workspaces. Additionally, USC researchers have access to all USC core facilities, as enumerated above in paragraph **7.a.i.**

d. **Neuroscience**: **USC Zilkha Neurogenetic Institute** is a cutting-edge research facility designed to advance the understanding of neurological and psychiatric disorders. Building features include high-tech research laboratories, advanced imaging and microscopy facilities, and a specialized vivarium. **USC's Mark and Mary Stevens Neuroimaging and Informatics Institute** is a high-tech facility dedicated to brain imaging and computational neuroscience, and features advanced neuroimaging suites, high-performance computer center, specialized research laboratories, and secure data infrastructure. Additionally, USC neuroscience researchers have access to all USC core facilities, as enumerated above in paragraph **7.a.i.**

8. Physical space costs are one of the largest components of indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research that can be done at USC. Without sufficient funding, we would have to consider closing research facilities or operating them at reduced schedules.

9. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH.[1] These mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being

[1] https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf

inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

10. Recovery of USC's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

11. The impact of a reduction in the indirect cost rate would be devastating. Of the $456.5M in NIH funding that USC received in FY24, approximately $233.9M was allocated for direct costs, $96.7M for subcontracts (which are not eligible for overhead recovery), and $125.8M for indirect costs. Similarly, in fiscal year 2025, USC expects to receive $319M in NIH funding for direct costs, while $121M is allocated for indirect costs. And over the next five years, USC anticipates receiving an average of $312M from the NIH for annual direct costs. Based on USC's predetermined indirect cost rate, which was agreed upon by the federal government as of May 29, 2024, the University thus expects to receive approximately $121M in indirect cost recovery on an annual basis.

12. If—contrary to what USC has negotiated with the federal government—the indirect cost rate is reduced to 15%, that would reduce the University's anticipated annual indirect cost recovery by $93.7M, to $32.0M.

13. This reduction would have deeply damaging effects on USC's ability to conduct research from day one. Most critically, it would necessarily and immediately result in staffing reductions across the board. Likely examples include:

a. Elimination of approximately 47 administrative staff, operational staff, and leadership positions related to research across 23 USC schools and academic units. The elimination of key research administrative staff would severely disrupt the efficiency and effectiveness of research operations at a university,

hindering grant management, regulatory compliance, and overall project coordination, ultimately slowing down research progress and impact.

b. Elimination of 8 staff members from the university's technology transfer unit. This would severely hinder the commercialization of research innovations, delaying the translation of discoveries into real-world applications and hindering the university's contribution to economic development and national progress through the creation of new technologies and industries.

c. Elimination of 6 staff members from the Institutional Animal Care and Use Committee, potentially halting critical scientific studies and impairing the university's ability to contribute to advancements in medicine and public health on a national scale.

d. Elimination of 8 staff members from USC's Human Research Protection Program, which would compromise the integrity and safety of human subjects in research, potentially halting vital clinical trials and undermining the university's ability to drive medical breakthroughs that benefit public health and contribute to national advancements in science.

e. Elimination of 4 staff members from USC's Department of Animal Resources, which has the potential to disrupt the care and management of research animals, compromising the quality and ethical standards of animal-based research and ultimately hindering the university's ability to contribute to scientific advancements in fields like medicine and biotechnology that have national and global impact.

14. USC anticipates the following immediate consequences of cutting the indirect cost rate to 15%:

a. **Stopping/curbing clinical trials**: A cut to F&A reimbursement would be devastating for the patients served by the National Cancer Institute-funded Norris Comprehensive Cancer Center. As many as 150 adults and children receive treatment through lifesaving NIH-funded clinical trials. In addition to reducing or eliminating access to novel experimental therapies and new combination therapies for people with cancer, the proposed change in F&A policy would stifle development of revolutionary immunotherapies and other desperately needed cancer treatments. Furthermore, impactful current federally funded clinical trials include work on increasing the uptake of effective colon cancer screening (colon cancer is a leading cancer that cost $24.3 billion in medical spending in 2020, accounting for 11.6% of all cancer treatment costs, and screening is highly effective).

b. **Closing critical research programs**: A cut to the indirect cost rate would result in the cessation of several of USC's critical biomedical efforts, including: (1) USC's cell and gene-based therapy programs that are focused on pediatric cancers, hereditary diseases such as sickle cell anemia, restoring heart function in heart failure, and new treatments for crippling arthritis; (2) USC's Alzheimer's Disease Research Center (one of the longest-existing such centers in the U.S.), which supports clinical trials of new therapies aimed at slowing the progression and even preventing Alzheimer's Disease (in 2024, care costs for Americans living with Alzheimer's and other dementias were projected to

reach $360 billion, i.e., over 1% of U.S. GDP); (3) USC's Diabetes and Obesity Research Institute which rapidly translates research findings to diabetes prevention and large patient education programs; (4) USC's Addiction Science Institute, which convenes teams of researchers across pharmaceutical sciences, psychiatry, and public health to curb drug and tobacco addiction in adolescents and adults, including ground-breaking work showing substantial harms in children from vaping; and (4) USC Mark and Mary Stevens Institute for Neuroimaging and Informatics, which houses the world's largest brain imaging research repository in Alzheimer's and related diseases (e.g., Parkinson's) to support the critical work of numerous researchers at other institutions.

c. **Reduction in biomedical research workforce:** In response to the rate reduction, USC would be forced to lay off approximately 20% of trained faculty and staff and implement drastic cuts (50%+) in research training programs that produce the next generation of trained scientists and specialized technologists. Furthermore, leading researchers may seek stable research environments in Canada, UK, and Germany, among other countries.

d. **Canceled Research Symposia:** USC invests in annual symposia that gather national/global experts convening on Alzheimer's disease, diabetes, artificial intelligence, prostate cancer, addiction, and many other issues. All planned symposia would be canceled.

15. USC has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both

direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. And in some cases, USC has long-term obligations—for example, faculty salaries and admitted PhD students—and it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments.

16. In addition to the immediate impacts and reliance interests described above, there are longer term impacts that are both cumulative and cascading. Anticipated cascading effects of cutting overhead include:

a. **Supply chain**: Decreases and/or delays in research will impact many industries that supply reagents and equipment that support research.

b. **Undermining the research safety and compliance infrastructure**: Loss of staff, expertise, and state-of-the-art tracking systems to monitor and support research programs and clinical trials.

c. **Closure/shrinking of medical schools and research institutes**: Depleted resources for research accelerating technologies (e.g. highly sensitive microscopes, scanners) will rapidly lead to shrinking and/or closures of medical schools and research institutes, with large economic impacts and worsening of the national shortage of physicians and other healthcare providers.

17. Disruptions to USC's research will also have negative effects in the Los Angeles area, the state of California, and the broader region. Approximately 19,000 California residents (not including student workers) are directly employed by USC—and it collaborates with state and local partners to help solve regional challenges through joint research and innovation. USC's

research also fuels spending in the regional economy, including by driving discoveries that launch new ventures, attract private investment, and make a positive social impact. A massive reduction in USC's research budget would immediately and seriously jeopardize these contributions to the local region.

18. Finally, slowdowns or halts in research by USC and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance. Anticipated broader impacts to the nation include:

a. **Loss of US pre-eminence:** US will lose pre-eminence in life-saving research and innovation, with China and India likely to step into the void

b. **National Security Risk:** Research in areas such as infectious diseases, public health, cancer therapies, computing, and artificial intelligence are all critical to mitigating the risk of pandemics, bioterrorism, and the economic burden of debilitating chronic disease.

c. **Major Hit to National Economy**: Discoveries arising from NIH-funded research provide a foundation for the U.S. biomedical industry, which contributes over $69 billion to the U.S. GDP each year and supports over 7 million jobs. A $1.00 increase in publicly funded basic research stimulates an additional $8.38 of industry research and development investment after 8 years. Furthermore, a $1.00 increase in publicly funded clinical research stimulates an additional $2.35 of industry research and development investment after 3 years.

19. Nor can USC cover the funding gap itself. While USC maintains an endowment, it is neither feasible nor sustainable for USC to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

a. The majority of USC's endowment—around 74%—is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. USC is not legally permitted to use those funds to cover research infrastructure costs.

b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically around 5%, to ensure long-term financial stability for the institution.

c. As a non-profit institution, USC reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, USC does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

19. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on USC—which would in turn force reductions in key investments supporting USC's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain USC's academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025, at Los Angeles, California.

/s/Ishwar Puri
Ishwar K. Puri
Senior Vice President of Research and Innovation

University of Southern California

EXHIBIT 29

DECLARATION OF C. CYBELE RAVER, VANDERBILT UNIVERSITY

I, C. Cybele Raver, Ph.D., declare as follows:

1. I am the Provost and Vice Chancellor for Academic Affairs at Vanderbilt University ("Vanderbilt" or the "University") in Nashville, Tennessee. I have held that position since July 1, 2021. I previously served as deputy provost at New York University, and I have led my own federally funded research laboratory for more than twenty years; my research, some of which has been funded by the National Institutes of Health, focuses primary on early learning and development.

2. As Provost and Vice Chancellor for Academic Affairs, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Vanderbilt personnel, and could testify thereto.

3. Vanderbilt receives substantial annual funding from the National Institutes of Health ("NIH"). In fiscal year 2024, Vanderbilt received a total of $156 million in funding from NIH, including $43.8 million in indirect costs. In fiscal year 2023, Vanderbilt received a total of $150 million in funding from NIH, including $40.9 million in indirect costs. In fiscal year 2022, Vanderbilt received a total of $139 million in funding from NIH, including $37.9 million in indirect costs. At present, Vanderbilt is authorized to conduct a total of $599.6 million in research across 729 grants funded by NIH.

4. The funding Vanderbilt receives from NIH supports critical and cutting-edge medical research, which millions of Americans benefit from and depend on. For example:

   a. Vanderbilt researchers are conducting lung imaging studies to support early detection and treatment of lung cancer for U.S. Army soldiers at Fort Campbell who have suffered burn-pit injuries.

b. Vanderbilt University School of Medicine researchers are engineering nanoparticles to more efficiently and safety deliver cancer immunotherapy to treat melanoma, breast cancer, and kidney cancer.

c. Vanderbilt School of Engineering researchers are finding ways to improve management of Type 1 diabetes in children.

d. Researchers in Vanderbilt's Peabody College of Education and Human Development are improving the lives of people with Down syndrome and autism spectrum disorder by understanding the causes of these disorders and developing and testing therapies tailored to each individual's needs.

e. Vanderbilt's Warren Center for Neuroscience Drug Discovery designs novel therapeutics for the treatment of serious brain disorders including Alzheimer's disease, Parkinson's disease, and schizophrenia.

f. Vanderbilt's Center for Addiction Research studies the circuits in the brain that underlie addiction, depression, and anxiety in order to develop effective interventions.

g. Researchers in Vanderbilt's School of Engineering are using animal models to study potential treatments for Alzheimer's and age-related cognitive decline.

Indirect costs are essential for supporting this research. The NIH's proposal to cut indirect cost rates to 15% would end or seriously jeopardize all of the scientific research projects described in this paragraph 4 (as well as over 700 other scientific studies).

5. Indirect costs provide support to procure necessary equipment and to construct and maintain facilities, including state-of-the-art laboratory and other spaces required to conduct advanced scientific research. Indirect costs literally "keep the lights on" to the extent they pay for

electricity and other utilities, and they also support information technology infrastructure, as well as important safety and compliance functions. Indirect costs also support certain administrative staff, whose functions are centralized within the university to provide for efficient grants administration, compliance with federal and state regulations, and reporting. Without this equipment, physical space, and personnel, we cannot conduct this life-saving scientific research.

6. For example, with respect to the areas of research described in Paragraph 4:

a. Imaging studies to understand diseases like cancer and Parkinson's disease require sophisticated staff and technical support, including information technology and computer system managers and electronic and mechanical engineers whose salaries are paid in part by indirect costs.

b. Many pharmaceutical studies begin with animal models involving mice and rats, where those animal colonies require specialized and continuous housing, feeding, and care. NIH-funded centralized scientific staff (including laboratory technicians and other scientific workers) are essential to the care of those animal colonies.

c. Research involving children is supported by administrative staff who ensure Vanderbilt is compliant with human subjects research and protection-of-minors protocols when using data from pediatric clinical trials and hosting minors on campus.

d. Researchers studying fetal development during pregnancy rely on sophisticated human imaging "core" facilities to conduct neuroimaging of pregnant women in the second and third trimesters and then follow their children to age 10.

e. Similarly, researchers studying personalized medicine rely on Vanderbilt Technologies for Advanced Genomics (VANTAGE), a genomics core laboratory funded by NIH, which accelerates discovery in genome sequencing through state-of-the-art equipment to perform DNA extraction and banking, among other specialized services.

7. Physical space costs are one of the largest components of indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research that can be done at Vanderbilt. If costs for physical office and lab space, including utilities, were not covered by indirect costs, Vanderbilt's leading scientists – especially promising junior faculty – will have limited or lower-quality space available to conduct their research, which will force them to reduce the scope of their research and as a result, miss milestones that were originally proposed to a funding agency. Vanderbilt's world-class scientists might be required to ration space and equipment, delaying their progress on groundbreaking research. Certain core facilities may be required to operate on reduced schedules due to limited staffing, resulting in delays or disrupting time-sensitive protocols.

8. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH.[1] These mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; properly managing and disposing of chemical and biological agents used in research; preventing financial

[1] https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf

conflicts of interest; managing funds; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

9. Recovery of Vanderbilt's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

10. Through fiscal year 2026, the predetermined indirect cost rates are 58.5% for on-campus organized research; 29.50% for off-campus organized research within 50 miles commuting distance of Vanderbilt; and 26.0% for off-campus organized research beyond 50 miles commuting distance of Vanderbilt.

11. The impact of a reduction in the indirect cost rate would be devastating. Of the $444.9 million in NIH funding that Vanderbilt received in fiscal year 2022-2024, approximately $322.3 million was allocated for direct costs and $122.6 million for indirect costs. Similarly, in fiscal year 2025, Vanderbilt expects to receive $118 million in NIH funding for direct costs, while $44.8 million is allocated for indirect costs. And over the next five years, Vanderbilt anticipates receiving an average of $137 million from the NIH for annual direct costs. Based on the predetermined indirect cost rate of 58.5%, which was agreed upon by the federal government as of May 6, 2021, the University thus expects to receive approximately $53.4 million in indirect cost recovery on an annual basis.

12. If—contrary to what Vanderbilt has negotiated with the federal government—the indirect cost rate is reduced to 15%, that would reduce the University's anticipated annual indirect cost recovery by $33 million, to $12 million.

13. This reduction will have deeply damaging effects on Vanderbilt's ability to conduct research from day one. In fact, the February 7, 2025 Notice from NIH has already caused Vanderbilt's most accomplished scientists to express alarm that if the policy takes effect for

existing awards beginning February 10, 2025, as announced, they might be required to take some or all of the following steps:

a. Shut down core research facilities;

b. Euthanize animals;

c. Terminate ongoing projects prematurely;

d. Operate with inadequate staffing, exposing lab personnel to serious safety hazards;

e. Freeze hiring of staff;

f. Freeze recruitment of graduate students and undergraduate interns, including rescinding current outstanding offers;

g. Lay off existing lab personnel; and

h. Postpone the start of human trials.

The uncertainty prompted by the NIH Notice has interfered with Vanderbilt scientists' ability to budget, plan for the future, and properly execute the research they were contracted to conduct. Despite university leadership's best efforts to provide support, our nation's leading scientists have experienced confusion and budgetary uncertainty as they are not sure they will be able to rely on the continued availability of the space, equipment, services, and personnel supported by the indirect costs that NIH previously indicated would be paid for their projects.

14. Vanderbilt has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory

compliance, and grant management support), and facility and equipment purchases. And in some cases, Vanderbilt has long-term obligations—for example, tenured scientist faculty salaries and support of PhD and other graduate students—and it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments.

15. In addition to the immediate impacts and reliance interests described above, there are longer term negative impacts that are severe, cumulative, and cascading. For example, there is a very real risk that path-breaking clinical trials will be disrupted, delaying their ability to improve the lives of American patients. As an example, NIH-funded Vanderbilt research on "cholinergic Deep Brain Stimulation" has received FDA approval to launch a human pilot clinical trial seeking to improve cognitive function across a range of neurological disorders. With immediate budget cuts, that ground-breaking project and over 700 other scientific studies will be placed "on hold." At many institutions with substantial NIH funding, this kind of widespread uncertainty will have severe effects on the biomedical workforce, which in turn will have a devastating economic impact on their families and the local communities where they live and may drive them to consider opportunities in other countries where research is a major source of investment. Where American academic research organizations including Vanderbilt have long been at the forefront of life-saving and life-improving discoveries, even short-term disruption will provide opportunity for other countries to challenge our collective leadership.

16. Disruptions to Vanderbilt's research will also have negative effects in the greater Nashville and Middle Tennessee area, the state of Tennessee, and the broader region. Nearly 7,000 Tennessee residents are directly employed by Vanderbilt—and it collaborates with state and local partners to help solve regional challenges through joint research and innovation. Most notably, Vanderbilt researchers often collaborate closely with fellow researchers at Vanderbilt University

Medical Center (VUMC), which is a separate legal entity that is the largest non-governmental employer in Middle Tennessee, with nearly 40,000 staff. Vanderbilt's research also fuels spending in the regional economy, including by driving discoveries that launch new ventures, attract private investment, and make a positive social impact. A massive reduction in Vanderbilt's research budget would immediately and seriously jeopardize these contributions to the local region.

17. Finally, slowdowns or halts in research by Vanderbilt and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance. For example, disruption to NIH-funded research could create setbacks for Vanderbilt researchers' work on treatments for infectious disease, Alzheimer's disease, breast cancer, and Long COVID.

18. Nor can Vanderbilt cover the funding gap itself. While Vanderbilt maintains an endowment, it is neither feasible nor sustainable for Vanderbilt to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

a. A significant portion of Vanderbilt's endowment—around 41.6%—is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. Vanderbilt is not legally permitted to use those funds to cover research infrastructure costs.

b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically around 5.0%, to ensure long-term financial stability for the institution. This is consistent with the requirement to prudently manage the endowment under Tennessee law. Tn. Code Sec. 35-10-203

c. As a non-profit, charitable educational institution, Vanderbilt reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, Vanderbilt does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

19. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on Vanderbilt—which would in turn force catastrophic reductions in key investments supporting Vanderbilt's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain Vanderbilt's academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025 at Vanderbilt University, Nashville, Tennessee.

C. Cybele Raver

EXHIBIT 30

DECLARATION OF DAVID J. GRAY

I, David J. Gray, declare as follows:

1. I am the Interim Senior Vice Chancellor and Chief Financial Officer at Washington University in St. Louis ("Washington University"). I have held that position since August 2024. I also hold the position of Senior Advisor with Huron Consulting. I came to these roles with extensive experience in higher education finance, having served as Senior Vice President for Finance and Business/Treasurer at The Pennsylvania State University and Senior Vice President for Administration, Finance and Information Technology at the University of Massachusetts.

2. As Interim Senior Vice Chancellor for Finance, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Washington University personnel, and could testify thereto.

3. Washington University receives substantial annual funding from the National Institutes of Health ("NIH"). During the period July 1, 2024 through December 31, 2024, Washington University received $267.38M in NIH funding. NIH funding to Washington University for FY24 totaled $532.29M.

4. The funding that Washington University receives from NIH supports critical and cutting-edge medical research, which millions of Americans benefit from and depend on. For example:

   a. Washington University is a leader in microbiome research, defining the role of gut microbiota in the development and potential treatment of childhood nutrition and in understanding how the microbiome influences other chronic diseases like inflammatory bowel disease and neurogenerative disease.

b. Washington University conducts ground-breaking research in emerging pathogens. This work provides important information that is critical for developing prophylactic measures and therapies to prevent another health pandemic and resulting loss of life.

c. Investigators at Washington University conduct research on Alzheimer's disease and other neurogenerative disease. This work will lead to improved diagnosis and care for persons with these diseases. Washington University's studies have led to new diagnostics for the early diagnosis of Alzheimer's disease. Washington University conducts large studies to identify new therapies for patients with Alzheimer's disease.

d. Washington University has been an important contributor to the development of cell and individualized antibody therapies to treat human cancer. These therapies have provided treatments to patients with previously untreatable cancers that have eliminated their cancer or significantly expanded their lifespan and improved their quality of life.

e. Washington University's theranostics research has developed targeted radiopharmaceuticals for diagnosis and treatment of multiple diseases. This research has improved the therapy of multiple cancers.

f. Washington University has a strong focus on using large databases for precision medicine. Novel work in artificial intelligence ("AI") is critical to this effort. The ability to mine large datasets will improve our ability to make new observations about human disease without the need for human subject research.

5. Indirect costs are essential for supporting this research. The NIH's proposal to cut indirect cost rates to 15% would end or seriously jeopardize all of the research projects described in paragraph 4.

6. Indirect costs include constructing and maintaining state-of-the-art facilities necessary to meet the technical requirements of advanced biomedical research. Without these facilities and the equipment they support, we cannot conduct the research.

7. For example, with respect to the areas of research described in Paragraph 4:

a. Microbiome scientists rely on gnotobiotic facilities to perform crucial proof-of-concept studies to help develop new therapies.

b. Investigation of emerging pathogens requires BSL3 labs. Those sophisticated labs are equipped with hoods, incubators, -80 freezers, centrifuges, and dedicated advanced microscopy.

c. Work in neurogenerative disease requires a large number of mass spectrometers to perform stable isotope labelling kinetic measurements in humans to determine the kinetics of proteins that contribute to neurodegeneration. These investigators also heavily use cryoelectron microscopy to define the structures of proteins involved in the pathogenesis of degenerative diseases.

d. Work in developing cell and antibody therapies requires a Good Manufacturing Practices ("GMP") facility. This facility requires equipment to grow cells in culture, chromatography machines to purify antibodies, sorters to purify culture cells, and electroporators to modify cells.

e. Our work in theranostics research requires sophisticated imaging systems and the availability of a GMP facility.

f. Our work in genomics, imaging, medical informatics, and AI require high-performing computing and application support.

8. Physical space costs are one of the largest components of indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research that can be done at Washington University. For example, Washington University recently opened one of the largest neuroscience research buildings in the world. This building is designed to foster collaboration amongst approximately 120 research teams working on neurogenerative diseases such as Alzheimer's, Parkinson's and Huntington's diseases. Construction of this research-exclusive building was undertaken with the express understanding that the debt service would be covered, in part, by continued receipt of indirect cost recovery from federal grants. The university also recently opened BSL3 labs, for research on emerging pathogens, with the same understanding. To maintain the debt service on these critical facilities in the face of the deficit created by a 15% indirect cost rate, Washington University will have to consider closing other important facilities such as the NIH-funded Gnotobiotics facility, referenced in paragraph 7c above.

9. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NIH.[1] These mandates serve many important functions, including protecting human and animal subjects involved in research; ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds in accordance with federal law; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

[1] https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf

10. Recovery of Washington University's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government and are subject to audit.

11. Through fiscal year 2025, the predetermined indirect cost rates are 55.5% for Washington University.

12. The impact of a reduction in the indirect cost rate would be devastating. In the worst case, if applied to Washington Univesrsity's entire federal grant portfolio, which was $374.44 million between July 1, 2024 through December 31, 2024, approximately $252.25 million was allocated for direct costs, and $122.19 for million for indirect costs. If, during that period, Washington University's indirect cost recovery had been capped at 15%, that recovery would have been limited to $35.19 million, a difference of $87 million, approximately $14.5 million per month. NIH grants represented approximately 70% of Washington University's grant portfolio during that period.

13. This reduction will have deeply damaging effects on Washington University's ability to conduct research from day one. It will necessarily and immediately require the university to revamp its present FY25 budget and its budget in preparation for FY26. As the university's leadership engages in this effort, it will be necessary to consider significant changes with impact on the research enterprise, the employees who help support that enterprise, and the dollars that flow into our St. Louis community through salaries and procurement. Changes under consideration include suspension of capital projects, hiring freezes for faculty and staff, reduced ability to support graduate students who working to serve as the next generation of scientists, reduction or elimination of merit-based salary increases, reduced scope for investment of research infrastructure, and greater than normal tuition rate increases.

14. Washington University may also have to consider staffing reductions, which could compromise our ability to adequately staff vital compliance functions, such as Environmental Health and Safety, Human Research Protection Office and Institutional Review Board, Office of Sponsored Research Services and Sponsored Projects Accounting, Office of Research Integrity and Ethics, and the Joint Research Contracting Office.

15. Washington University has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. And in some cases, Washington University has long-term obligations—for example, such as admitted PhD students—and it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments.

16. In addition to the immediate impacts and reliance interests described above, there are longer term impacts that are both cumulative and cascading. For example, as a National Cancer Center, the Siteman Cancer Center at Washington University offers the expertise of 600 Washington University research scientists and physicians to approximately 75,000 people a year, including 12,000 newly diagnosed patients. Scientists and physicians affiliated with Siteman hold more than $180 million annually in basic and clinical oncology grants. The results of basic laboratory research are rapidly incorporated into treatment advances and patients at Siteman have access to 700 therapeutic clinical trials. Siteman also pursues an active outreach program of cancer screening and education, which reaches tens of thousands of individuals annually throughout the

St. Louis region. The loss of resources occasioned by a dramatic cut in the indirect cost rate would cause the program to scale back the scope of these valuable lifesaving services.

17. Finally, slowdowns or halts in research by Washington University and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance.

18. Nor can Washington University cover the funding gap itself. While the university maintains an endowment, it is neither feasible nor sustainable for the university to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

a. The majority of Washington University's endowment—around 63%—is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs, and 55% of the endowment is permanently restricted. Washington University is not legally permitted to use those funds to cover research infrastructure costs.

b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically between 3% and 5.5% of the five-year average market value per unit of endowment, to ensure long-term financial stability for the institution.

20. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on Washington University—which would in turn force reductions in key investments supporting the university's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain its academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 10, 2025 at St. Louis, Missouri.

David J. Gray

EXHIBIT 31

DECLARATION OF DOROTA GREJNER-BRZEZINSKA

I, Dorota Grejner-Brzezinska, declare as follows:

1. I am the Vice Chancellor for Research at the University of Wisconsin-Madison ("UW-Madison"), a position I have held since 2024. In this role, I have responsibility for overseeing the university's research enterprise with more than $1.7 billion in annual research expenditures. My office also includes administration of 20 cross-campus research and service centers. The mission of the Office of the Vice Chancellor for Research is to advance excellence in research and scholarship, to support our multidisciplinary research centers and institutes, and to provide campus-wide administrative infrastructure to support and advance the research enterprise. Prior to holding this position, I was the Vice President of the Office of Knowledge Enterprise and a Professor of civil, environmental, and geodetic engineering at The Ohio State University.

2. As the Vice Chancellor for Research, I have personal knowledge of the matters set forth below, or have knowledge of the matters based on my review of information and records gathered by university staff.

3. I am providing this declaration to explain certain impacts on UW-Madison of the National Institutes of Health ("NIH") Notice Number NOT-OD-25-068, *Supplemental Guidance to the 2024 NIH Grants Policy Statement: Indirect Cost Rates,* which UW-Madison became aware of at approximately 5 p.m. on Friday, February 7, 2025. NIH's *Supplemental Guidance* purports to impose, beginning on Monday, February 10, 2025, a standard indirect costs ("IDC") rate of 15% to all grants awarded by the agency. The newly announced rate would apply to "new grant awards and existing grant awards," giving it retroactive application to research already occurring at the university in reliance on the previously negotiated rate.

4. UW-Madison is Wisconsin's flagship research university. It operates under the premise that research and education should influence the lives of others beyond the boundaries of the campus. Research at UW-Madison drives innovation related to treating adult and pediatric cancer, Alzheimer's, diabetes, degenerative neurologic diseases, and more. Further, the research enterprise supports training and development of UW-Madison students. This research is supported by $513 million from the Department of Health and Human Services ("HHS"), which primarily comes from the NIH.

5. UW-Madison has a Negotiated Indirect Cost Rate Agreement ("NICRA") with HHS, covering all federal agencies, and effective as of January 17, 2025. The IDC rate in UW-Madison's NICRA is 55.5%. This rate is composed of 26% for administrative costs and 29.5% for facility costs. Administrative costs are the general costs to administer research, such as accounting, payroll, and research oversight and are capped by federal law at 26%. Facility costs include the maintenance and depreciation of the research facilities.

6. UW-Madison's federally negotiated IDC rate has remained steady, with slight increases since 2013; at that time the negotiated rate was 53%, just marginally lower than the current 55.5%. UW-Madison reasonably relies on a generally consistent rate of negotiated IDC reimbursement in making its financial plans.

7. NIH's reduction of UW-Madison's negotiated IDC rate would eliminate approximately $65 million in funding in the current year, and result in a similar reduction in resources available to support research each year. UW-Madison depends on this source to support its research programs and general infrastructure. The loss of these funds will immediately impact the university's ability to draw critical funds used to pay expenses associated with its research enterprise. This includes the costs to support strict federal regulatory compliance

mandated for federally funded research that are intended to, for example, promote national security interests and maintain the nation's competitive edge through export controls and measures to prevent malign foreign influence; protect human and animal participants in research; protect public investments in research; ensure the safe conduct of research involving hazardous biological agents, recombinant DNA, and radiation; and ensure the integrity of research funded by American taxpayers.

8. UW-Madison's campus includes over 17 million gross square feet dedicated to education and general purposes. Many of its buildings are highly technical, and more than half are over 50 years old. Funding from IDC recovery goes directly toward maintenance, utilities, and renovations in these buildings, particularly for updating laboratories where much of the federally sponsored research is conducted. These projects ensure campus laboratories are not only properly equipped to support sophisticated, cutting-edge research, but to protect the safety of university scientists, students, and the surrounding community and meet federal compliance obligations. State law prevents the use of other sources of unrestricted revenue for campus-funded renovation projects and donor support for infrastructure upgrades is challenging to secure. Therefore, IDC revenue plays a critical role in maintaining the adequacy of our facilities; any revenue loss would only exacerbate our deferred maintenance backlog. The sudden loss of IDC funding imperils not just research space, as research and academic facilities at the University share buildings; reduced maintenance resources will affect the entire university physical environment.

9. Reduction of UW-Madison's IDC rate will also negatively and specifically impact the institution's ability to conduct clinical research related to cancer treatment (including pediatric), Alzheimer's Disease and other types of dementia, cardiac conditions, fetal heart

conditions, maternal–fetal health, autism, addiction recovery, diabetes, asthma, adolescent and adult depression and post-traumatic stress, infectious diseases, Huntington's Disease, HIV, conditions affecting nursing home patients, veteran's health, and more. Many research participants are on treatment trials, which means they are patients actively receiving innovative treatments that may impact their disease process or alleviate symptoms. More than 20,000 patients that have been in our care for at least a year are part of this research and the university has had 3,461 new enrollments so far in this fiscal year. IDCs are central among the funds that support infrastructure necessary for the conduct of this research, including laboratories and clinical space for the work, protocol review and secure data storage and transfer systems, and personnel tasked with ensuring regulatory compliance for the protection of human participants and their data. Sophisticated and extensive infrastructure is necessary to meet federal requirements related to protection of participants' rights, welfare, and safety, and data integrity; data security for participants' confidential and sensitive health information; data management and sharing with clincaltrials.gov and NIH/other repositories; financial reporting, including effort reporting, to demonstrate appropriate use of federal funds; and progress reporting to federal agencies. The unanticipated and abrupt loss of $65 million will place the university in the sudden, untenable position of no longer being able to rely on promised federal funding to support the daily activities and operations that support life-saving clinical and translational research at UW-Madison. If alternative sources of funding cannot be secured to fill this void, the reduction in IDC could necessitate programmatic downsizing at the university, including potentially terminating some clinical trials, thereby leaving a population of patients with no viable alternative. At a minimum, the decrease will constrain our growth trajectory in clinical research, preventing us from fully serving the sickest and most vulnerable individuals in the region.

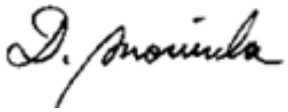
10. In addition to clinical research, NIH-funded fundamental science provides the building blocks to predict, prevent, diagnose, and treat disease. Medicines to treat cancer, neurodegenerative disease, diabetes, and numerous other ailments have been developed by leveraging breakthroughs made in basic science laboratories. Advancements in imaging technologies led by medical physicists now allow doctors to visualize diseased tissues in the body and ultimately treat them. In combination with genomics approaches developed by basic scientists, personalized medicine is now becoming a reality. The IDCs associated with these fundamental studies are essential to supporting the research infrastructure and the personnel who enable scientific discoveries in the lab. Maintaining and equipping buildings to conduct research is essential to keeping the U.S. at the forefront of knowledge and medical discoveries.

11. The timing of receipt of NIH's announcement—late on Friday, February 7—of its intent to significantly curtail its IDC rate particularly strains the university and its researchers with respect to decisions about applications for grant awards. The submission deadline for NIH Research Training and Career Development (series K) awards is Wednesday, February 12, 2025. These grants are often instrumental in fostering the success of early career scientists. Additionally, the deadline for small research grants (R03), exploratory grants (R21/R33, UH2/UH3), planning grants (R34), dissertation awards (R36), and planning cooperative projects (U34) is Sunday, February 16, 2025. NIH's eleventh-hour change in available funding forces researchers and university administrators to reconsider whether to submit grant applications, many of which they have been fine-tuning for months, given uncertainty about whether the institution can afford to sustain these projects at a 15% IDC rate. The sense of whiplash is particularly acute, given that UW-Madison had finalized its most recent NICRA with HHS less than three weeks prior.

12. UW-Madison typically draws down funds for NIH-funded projects twice per month and next anticipates drawing funds on or around February 17, 2025. At that time, if allowed to be implemented, the reduced IDC rate will result in UW-Madison experiencing a $3.9 million loss in IDC recovery for this upcoming draw.

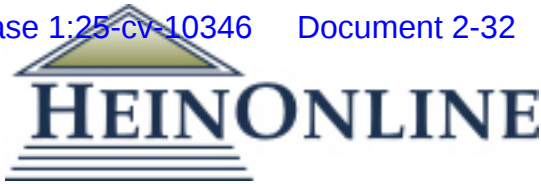
I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 9, 2025, at Madison, Wisconsin.



Dorota Grejner-Brzezinska

EXHIBIT 32



EXAMINING THE OVERHEAD COST OF RESEARCH

JOINT HEARING

BEFORE THE

SUBCOMMITTEE ON RESEARCH AND TECHNOLOGY

&

SUBCOMMITTEE ON OVERSIGHT

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

HOUSE OF REPRESENTATIVES

ONE HUNDRED FIFTEENTH CONGRESS

FIRST SESSION

May 24, 2017

Serial No. 115–15

Printed for the use of the Committee on Science, Space, and Technology

Available via the World Wide Web: http://science.house.gov

U.S. GOVERNMENT PUBLISHING OFFICE

25–470PDF WASHINGTON : 2017

For sale by the Superintendent of Documents, U.S. Government Publishing Office
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May 24, 2017

EXAMINING THE OVERHEAD COST OF RESEARCH

WEDNESDAY, MAY 24, 2017

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON RESEARCH AND TECHNOLOGY AND
SUBCOMMITTEE ON OVERSIGHT
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY,
Washington, D.C.

The Subcommittees met, pursuant to call, at 10:05 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Barbara Comstock [Chairwoman of the Subcommittee on Research and Technology] presiding.

LAMAR S. SMITH, Texas
CHAIRMAN

EDDIE BERNICE JOHNSON, Texas
RANKING MEMBER

Congress of the United States
House of Representatives
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
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Examining the Overhead Cost of Research

Wednesday, May 24, 2017
10:00 a.m.
2318 Rayburn House Office Building

Witnesses

Mr. Dale Bell, Division Director, Institution and Award Support, National Science Foundation

Mr. John Neumann, Director, Natural Resources and Environment, U.S. Government Accountability Office

Mr. James Luther, Associate Vice President of Finance & Compliance Officer, Duke University; Chairman of the Board, Council on Government Relations

Dr. Richard Vedder, Distinguished Professor of Economics Emeritus, Ohio University, Department of Economics

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

HEARING CHARTER

Wednesday, May 24, 2017

TO: Members, Committee on Science, Space, and Technology

FROM: Majority Staff, Committee on Science, Space, and Technology

SUBJECT: Research and Technology Subcommittee and Oversight Subcommittee hearing "Examining the Overhead Cost of Research"

The Subcommittee on Research and Technology and the Subcommittee on Oversight of the Committee on Science, Space, and Technology will hold a hearing titled *Examining the Overhead Cost of Research* on Wednesday, May 24, 2017 at 10:00 a.m. in Room 2318 of the Rayburn House Office Building.

Hearing Purpose:

The purpose of the hearing is to examine the overhead costs for conducting federal taxpayer-funded research at universities and non-profit research institutions, including how the National Science Foundation and other federal research agencies negotiate and monitor indirect costs (facilities and administrative costs), and hear recommendations for improving efficiency and transparency.

Witness List

- **Mr. Dale Bell**, Division Director, Institution and Award Support, National Science Foundation
- **Mr. John Neumann**, Director, Natural Resources and Environment, U.S. Government Accountability Office
- **Mr. James Luther**, Associate Vice President of Finance & Compliance Officer, Duke University; Chairman of the Board, Council on Governmental Relations
- **Dr. Richard Vedder**, Distinguished Professor of Economics Emeritus, Ohio University, Department of Economics; Director, Center for College Affordability and Productivity

Staff Contact

For questions related to the hearing, please contact Jenn Wickre of the Majority Staff at 202-225-6371.

Chairwoman COMSTOCK. The Committee on Science, Space and Technology will come to order.

Without objection, the Chair is authorized to declare recesses of the Committee at any time.

Good morning, and welcome to today's hearing titled "Examining the Overhead Cost of Research." I now recognize myself for five minutes for an opening statement.

The purpose of today's hearing is to examine the overhead costs of research, including how the National Science Foundation and other federal agencies negotiate and monitor these costs, how these funds are used, and to hear recommendations for improving efficiency and transparency.

Last year, this Subcommittee held a hearing on Academic Research Regulatory Relief, which looked at recommendations for streamlining federal regulations on academic research.

It has been a pleasure working with Ranking Member Lipinski on this Committee to cut the red tape, and I look forward to continuing that bipartisan cooperation.

Through legislation such as the American Innovation and Competitiveness Act, as well as the 21st Century Cures Act, both of which were signed into law in the past six months, we were able to listen to recommendations from universities and students to implement better practices designed to address inefficiencies and increase transparency. I was proud to sponsor the Research and Development Efficiency Act, which was included in the American Innovation and Competiveness Act.

As we move forward with reforming regulations, it is important to look at whether or not there are opportunities to streamline overhead costs as well, so that more money can go directly into this important research.

Last year, the National Science Foundation spent $1.3 billion on overhead or indirect costs—nearly 20 percent of the research budget. The National Institute of Health spends $6.3 billion on indirect costs—27 percent of the $24 billion extramural research budget. In a time of tough budgets, when only one out of five research grant proposals are funded, which we all know is too little, we must look at whether or not those overhead funds are being spent efficiently because we want to make sure more of those projects can be funded.

There is no question that there are legitimate and necessary overhead costs for conducting the best research in the world.

Since World War II, the federal government, Universities, and nonprofit research institutions have worked in partnership to conduct research in our nation's interest. This partnership has served our nation well, spurring innovation to new heights. Universities and nonprofits provide laboratory space, pay the electric bills, buy equipment, and conduct accounting for federally funded research, while the federal government shares the cost by reimbursing certain expenses.

However, over time that system has become more complex and in some cases more expensive, as we will hear from our witnesses today. Adding to that complexity is that since the 1960s, every institution negotiates its own indirect cost rate directly with the federal government. Today, indirect cost rates for universities and in-

stitutions vary widely from less than one percent to over 60 percent. It raises a question of whether or not we have inadvertently created a system of have and have nots, where wealthy institutions benefit the most.

Last year, Dr. Angel Cabrera, President of George Mason University—a University that serves many in my district—testified before the Subcommittee on the struggles of leading one of the fastest growing research institutions in the country, trying to break into the top tier while keeping tuition and fees low. I have a letter I am submitting for the hearing record from George Mason's Vice President for Research, Deborah Crawford, on how GMU uses overhead costs. I appreciate George Mason's input, and their commitment to transparency and keeping education costs low.

One of my priorities as Chair of the Research and Technology Subcommittee is to make sure we are always maximizing the taxpayers' important investment in basic and fundamental research. It is important we give taxpayers confidence in how that investment is spent, so that we can continue to sustain and grow research funding. Ultimately, research is about creating good jobs and a secure future, a common goal I know we all share.

And with that, I look forward to hearing the testimonies of our guests.

[The prepared statement of Chairwoman Comstock follows:]

COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY
Lamar Smith, Chairman

For Immediate Release
May 24, 2017

Media Contact: Kristina Baum
(202) 225-6371

Statement of Research and Technology Subcommittee Chairwoman Barbara Comstock (R-Va.)

Examining the Overhead Cost of Research

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It raises a question of whether or not we have inadvertently created a system of "have and have nots," where wealthy institutions benefit the most.

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Ultimately, research is about creating good jobs and a secure future, a common goal I know we all share.

And with that, I look forward to hearing the testimonies of our guests.

###

Chairwoman COMSTOCK. I now recognize the Ranking Member of the Research and Technology Subcommittee, Mr. Lipinski, for his opening statement.

Mr. LIPINSKI. Thank you, Chairwoman Comstock and Chairman LaHood, for calling this hearing. This is an important oversight topic, and I thank our panelists for being here to share their perspectives.

There's always been some discussion within the research community about federal reimbursement for costs incurred by organizations that conduct research funded by the federal government, that is, work essentially done on behalf of the government. While most agree that direct costs for this research should be fully reimbursed by the federal government, opinions diverge when considering the extent of reimbursement for indirect costs, or overhead.

Overhead costs incurred by universities provide the services that make cutting-edge research possible, such as electricity, chemical and radiation safety, libraries and research facilities, financial accounting, data storage and internet access, and many others. Indirect costs also include the support necessary to comply with the high administrative burden that comes with federal research funding. As the Chairwoman mentioned, I've worked with her on this Committee to reduce some of this administrative burden, and there is more bipartisan work that we should do in easing this burden.

The bottom line is that indirect cost reimbursement is essential to American universities' capacity to execute their research as well as train the next generation of scientists and engineers that our country needs. NSF is not the cognizant agency for indirect cost negotiations for universities. However, universities account for approximately 90 percent of the total amount budgeted by NSF for indirect costs each year. We may address NSF's role in setting rates for nonprofits and small businesses, but the bulk of this debate centers around major research universities.

There are many strictly enforced controls and regulations on reimbursement for indirect costs. One such control is that indirect cost reimbursements are based on modified total direct costs rather than total direct costs, excluding expenses such as graduate student tuition and equipment purchases, which are not expected to require extensive facilities or administrative support. As a result, indirect cost reimbursement rates as a percentage of total direct costs are much lower than the more commonly stated negotiated rates. According to Nature magazine, the average negotiated rate is 53 percent, but the average reimbursed rate is only 34 percent. I think it's important that we're all on the same page about exactly what these rates mean, and that we don't let large numbers mislead us.

Some have expressed concern that administrative inefficiencies and conflicts of interest have led to rising indirect costs. The evidence does not seem to bear this out. Based on Mr. Neumann's testimony, GAO has not found that to be the case for NSF. GAO has expressed concern about possible rising rates at NIH, but NIH disputes GAO's analysis.

Some of our top universities believe that the government is not paying them a fair amount for the research they conduct. It's my understanding that for every federal dollar a university is awarded

for research, the university contributes 30 to 40 cents of its institutional funds to make that research possible. At the University of Illinois, in fiscal year 2016, only 76 percent of actual indirect costs incurred on NSF grants were reimbursed, meaning that the university contributed $9.1 million of its own funds to close the indirect cost gap for its NSF grants alone.

Annual university subsidies amounting to hundreds of millions of dollars nationwide clearly demonstrate a willingness on behalf of research universities to contribute their own resources to the research conducted at their institutions. Sometimes, these subsidies even support the research infrastructure that NSF, as part of its mission, aims to provide. For example, the University of Illinois is home to the Extreme Science and Engineering Discovery Environment, an NSF-funded user facility that supports other universities, research facilities, and NSF-funded projects around the country and the world. As with all NSF-funded projects at the U of I, the facility's overhead costs are partially subsidized by the university, representing a contribution by the university to the national research infrastructure.

Universities undoubtedly benefit from hosting prestigious research programs that enable them to recruit preeminent scientists and top students and spin off local companies and jobs. Yet it is hard for me to understand the argument by some that universities are making a profit. All of the evidence I have seen suggests otherwise.

Furthermore, federally funded research is a public good. I consider it a win-win that it also benefits local economies.

These are good debates to have and critical questions to address when talking about the health of the partnership between the federal government and research universities. I think we can all agree that we want this partnership to succeed at producing research that remains the envy of the world for many years to come.

Thank you, again, to our witnesses for being here. I look forward to your testimony and a fruitful discussion on this important issue.

I yield back the balance of my time.

[The prepared statement of Mr. Lipinski follows:]

OPENING STATEMENT
Ranking Member Dan Lipinski (D-IL)
of the Subcommittee on Research and Technology

Committee on Science, Space & Technology
Subcommittee on Oversight
Subcommittee on Research & Technology
"Examining the Overhead Cost of Research"
May 24, 2017

Thank you, Chairwoman Comstock and Chairman LaHood, for calling this hearing. This is an important oversight topic and I thank our panelists for being here to share their perspectives.

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Thank you, again, to our witnesses for being here. I look forward to your testimony and a fruitful discussion on this important issue. I yield back the balance of my time.

Chairwoman COMSTOCK. Thank you, Mr. Lipinski, and I now recognize the Chairman of the Oversight Subcommittee, Mr. LaHood, for an opening statement.

Chairman. LAHOOD. Thank you, Chairwoman Comstock and Ranking Member Lipinski. Good morning and welcome to today's hearing: "Examining the Overhead Cost of Research." I would like to welcome today's witnesses to our hearing and thank each of you for your attendance today.

The purpose of today's hearing is to examine opportunities to stimulate innovative research at universities and nonprofit research institutions, while assessing measures to reduce overhead costs of conducting research.

As part of our hearing today, we want to foster a discussion regarding whether we are directing precious taxpayer resources toward research in the most efficient and effective manner. Part of our discussion today will include learning more about how the National Science Foundation, charged with administering federal grant funds for countless research institutions, negotiates indirect costs rates, as well as the share of indirect costs in cumulative grant funding.

We will hear from GAO today about a new study, finding that the growth of indirect costs at NSF has exceeded the growth of direct research costs and recommending improvements for better cost controls. As part of its study, GAO found that from 2000 to 2016, indirect costs represented 16 to 24 percent of NSF's total grant funds. In total, GAO found that for fiscal year 2016, NSF awards included about $1.3 billion for indirect costs, representing approximately 22 percent of the total $5.8 billion in grant awards for fiscal year 2016.

Further, during its analysis of NSF's fiscal year 2016 grant awards, GAO found that 90 percent of NSF's awards included indirect costs. GAO also discovered that the proportion of indirect costs ranged from less than one percent of the grant award to 59 percent of the grant award, in some cases.

GAO analyzed the types of awardees that budget for indirect costs, including federal, industry, small business, and universities, identifying universities as having some of the highest indirect cost rates.

As part of its review, GAO identified potential areas for improved oversight of awardees' use of indirect grants, including reporting information about indirect costs when awardees request reimbursement, enhancing NSF's online approach to award payments to include collecting information on indirect costs, and consistently following NSF's own guidance for tracking and setting indirect cost rates.

In light of GAO's study, we want to ensure we are doing our due diligence to further innovative research initiatives, while ensuring taxpayer dollars are expended in the most efficient way possible by directly furthering research.

As many in this room know, encouraging innovative research, like that conducted at universities and nonprofit institutions across this nation, is vital to the long-term success of our economy and our nation.

Close to my own district, I have seen this work firsthand at truly outstanding research institutions, like the University of Illinois-Urbana and Western Illinois University in Macomb. My district is also located close to the National Center for Supercomputing Applications located on the campus of the University of Illinois, which houses the Blue Waters supercomputer. This is one of the most powerful computers in the world, and it is capable of algorithms that can help inform a broad range of research, ranging from tax and budget-based research to cybersecurity. Western Illinois University, along with other research institutions, use the Blue Waters supercomputer to conduct innovative research that helps empower scientists and researchers across the world by informing novel research initiatives.

During my time in Congress, I have made it my priority to help support these endeavors. In fact, last Congress, I sponsored the Networking and Information Technology Research and Development Modernization Act (NITRD), which was designed to help bolster policies for research related to high-end computing, cybersecurity, and high capacity systems software. This legislation aims to reduce bureaucracy and red tape that so often hampers innovative research initiatives, while ensuring that taxpayer dollars are spent effectively. It is my goal that the NITRD legislation, which was passed by the House of Representatives last Congress, as well as similar pieces of legislation, will be a core part of the 115th Congress's agenda and assist universities and research institutions in pursuing much-needed and potentially revolutionary new research.

As we are conducting this groundbreaking research, we must—we cannot forget whose money we are spending. We must all strive to be good stewards of taxpayer dollars.

I hope that today's hearing will help us examine some of the issues that may be hampering innovative research, such as rising overhead costs. Universities and nonprofit research institutions are at the forefront of innovative inquiries and studies that often result in lasting implications to help better our society technologically. Understanding that research is essential to furthering U.S. innovation as we in Congress must learn how we can increase effectiveness of taxpayer dollars used to fund research.

I know each of the witnesses here today will help encourage a fruitful and engaging discussion and provide insight on ways we can improve the efficiency of university research by examining overhead costs.

I thank each of the witnesses for their testimony today and look forward to an informative discussion. Thank you.

[The prepared statement of Mr. LaHood follows:]

COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY
Lamar Smith, Chairman

For Immediate Release
May 24, 2017

Media Contact: Kristina Baum
(202) 225-6371

Statement of Oversight Subcommittee Chairman Darin LaHood (R-Ill.)
Examining the Overhead Cost of Research

Chairman LaHood: Good morning and welcome to today's hearing: "Examining the Overhead Cost of Research."

I would like to welcome today's witnesses to our hearing and thank each of you for your attendance today. The purpose of today's hearing is to examine opportunities to stimulate innovative research at universities and non-profit research institutions, while assessing measures to reduce overhead costs of conducting research.

As part of our hearing today, we want to foster a discussion regarding whether we are directing precious taxpayer resources toward research in the most efficient and effective manner. Part of our discussion today will include learning more about how the National Science Foundation, charged with administering federal grant funds for countless research institutions, negotiates indirect costs rates, as well as the share of indirect costs in cumulative grant funding.

We will hear from GAO today about a new study, finding that the growth of indirect costs at NSF has exceeded the growth of direct research costs and recommending improvements for better cost controls. As part of its study, GAO found that from 2000 to 2016, indirect costs represented 16 to 24 percent of NSF's total grant awards. In total, GAO found that for fiscal year 2016, NSF awards included about $1.3 billion for indirect costs, representing approximately 22 percent of the total $5.8 billion in grant awards for fiscal year 2016.

Further, during its analysis of NSF's fiscal year 2016 grant awards, GAO found that 90 percent of NSF's awards included indirect costs. GAO also discovered that the proportion of indirect costs ranged from less than one percent of the grant award to 59 percent of the grant award, in some cases. GAO analyzed the types of awardees that budget for indirect costs, including federal, industry, small business, and universities, identifying universities as having some of the highest indirect cost rates.

As part of its review, GAO identified potential areas for improved oversight of awardees' use of indirect grants, including reporting information about indirect costs when awardees request reimbursement, enhancing NSF's online approach to award payments to include collecting information on indirect costs, and consistently following NSF's own guidance for tracking and setting indirect cost rates. In light of GAO's study, we want to ensure we are doing our due diligence to further innovative research initiatives, while ensuring taxpayer dollars are expended in the most efficient way possible by directly furthering research.

As many in this room know, encouraging innovative research, like that conducted at universities and non-profit institutions across this nation, is vital to the long-term success of our economy and our nation. Close to my own district, I have seen this work first-hand at truly outstanding research institutions, like the University of Illinois-Urbana and Western Illinois University.

My district is also located close to the National Center for Supercomputing Applications (NSCA), located on the campus of the University of Illinois, which houses the Blue Waters supercomputer. This is one of the most powerful computers in the world, and it is capable of algorithms that can help inform a broad range of research, ranging from tax and budget-based research to cybersecurity. Western Illinois University, along with other research institutions, use the Blue Waters supercomputer to conduct innovative research that helps empower scientists and researchers across the world by informing novel research initiatives.

During my time in Congress, I have made it my priority to help support these endeavors. In fact, last Congress, I sponsored the Networking and Information Technology Research and Development (NITRD) Modernization Act, which was designed to help bolster policies for research related to high-end computing, cybersecurity, and high capacity systems software. This legislation aims to reduce bureaucracy and red tape that so often hampers innovative research initiatives, while ensuring that taxpayer dollars are spent effectively.

It is my goal that the NITRD legislation, which was passed by the House of Representatives last Congress, as well as similar pieces of legislation, will be a core part of the 115th Congress's agenda and assist universities and research institutions in pursuing much-needed and potentially revolutionary new research.

As we are conducting this ground-breaking research, we cannot forget whose money we are spending. We must all strive to be good stewards of taxpayer dollars. I hope that today's hearing will help us examine some of the issues that may be hampering innovative research, such as rising overhead costs.

Universities and non-profit research institutions are at the forefront of innovative inquiries and studies that often result in lasting implications to help better our society technologically. Understanding that research is essential to furthering U.S. innovation, we as Congress want to learn how we can increase the effectiveness of taxpayer dollars used to fund research.

I know each of the witnesses here today will help encourage a fruitful and engaging discussion and provide insight on ways we can improve the efficiency of university research by examining overhead costs. I thank each of the witnesses for their testimony today and look forward to an informative discussion.

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Chairwoman COMSTOCK. Thank you, Mr. LaHood.

And I now recognize the Ranking Member of the Oversight Committee, Mr. Beyer, for his opening statement.

Mr. BEYER. Thank you, Chairwoman Comstock, and thank you, Chairman LaHood, for having this hearing today.

I generally agree with the questions raised by Ranking Member Lipinski about overhead costs on federally funded research but I also want to emphasize the importance of the National Science Foundation and our other science agencies in spurring innovation, economic growth, and technological advancements in multiple arenas.

I'm a small business owner, and I understand that indirect costs—overhead—are still costs that have to be covered and funded. I cannot run my automobile dealerships without electricity for light, heat, the tools, without accountants to manage our budgets, without IT gurus to maintain the computers that manage every aspect of our inventory and sales processes, and without the mortgages on our buildings. These kinds of overhead costs are just as necessary to run a science lab as they are to operate an automobile dealership.

Of course, we must always strive to improve the management of federal research grants, and of course, we must search for effective and efficient methods to spend and to oversee these funds. But should we drastically cut federal funds to science agencies that lead to innovative technological discoveries, as the Trump Administration has proposed? Absolutely not. These would be foolhardy decisions that would jeopardize our economic competitiveness and our ability to develop important national security technologies and make vital medical and other scientific advancements.

So I'm deeply concerned about efforts by this Administration, the budget we saw yesterday, to drastically reduce scientific funding to the National Institutes of Health, the Department of Energy, the Environmental Protection Agency, the National Oceanic Atmospheric Administration, the National Science Foundation, and many others. This shortsighted abandonment of our investment in science can only harm our economy, our health, our world leadership, and our ability to innovate in the middle and long term.

The National Science Foundation plays the fundamental, foundational role in funding scientific research in the United States: sine qua non. The NSF builds our scientific knowledge, improves our security, expands our economy, and helps us compete. Each year they award more than $7 billion in approximately 12,000 new grant awards to nearly 2,000 institutions. The National Science Foundation accounts for nearly one-quarter of all federal research funding for basic science conducted by America's colleges and universities.

Look, I don't think any Member of Congress is opposed to exploring reasonable and responsible opportunities to ensure that our federal funds are spent as efficiently and effectively as possible. Improvements in financial management are always possible and should be pursued but let's be fully aware of the unintended consequences of our actions. Let's be certain any changes we make keep the best scientists doing the most important work for the National Science Foundation. Let's make sure we're not initiating a

race to the bottom, with prizes to the lowest bidder doing the least valuable research.

I look forward to hearing the testimony of our witnesses, and I trust we'll have a constructive dialogue about the important role of the federal government in funding science.

Thanks, Madam Chair. I yield back.

[The prepared statement of Mr. Beyer follows:]

OPENING STATEMENT
Ranking Member Don Beyer (D-VA)
of the Subcommittee on Oversight

Committee on Science, Space, and Technology
Subcommittee on Oversight
Subcommittee on Research and Technology
"Examining the Overhead Cost of Research"
May 24, 2017

Thank you Chairwoman Comstock and Chairman LaHood for having this hearing today.

I generally agree with the questions raised by Ranking Member Lipinski about overhead costs on federally funded research. But I also want to emphasize the importance of the National Science Foundation and our other science agencies in spurring innovation, economic growth, and technological advancements in multiple arenas.

As a small business owner, I understand that indirect costs -- or overhead -- are still costs that need to be covered and funded. I cannot run my auto dealerships without electricity for light, heat, and the tools, without accountants to manage our budgets, without IT gurus to maintain the computers that manage every aspect of our inventory and sales processes, and without the mortgages on our buildings. These kinds of overhead costs are just as necessary to run a science lab as they are to operate an automobile dealership.

Of course, we must always strive to improve the management of federal research grants. Of course, we must search for effective and efficient methods to spend and to oversee these funds. But should we drastically cut federal funds to science agencies that lead to innovative technical discoveries, scientific breakthroughs and economic growth, as the Trump Administration has proposed? Absolutely not. These would be foolhardy decisions that would jeopardize our economic competitiveness and our ability to develop important national security technologies and make vital medical and other scientific advancements.

I am deeply concerned about efforts by this Administration to drastically reduce scientific funding to the National Institutes of Health, the Department of Energy, the Environmental Protection Agency, the National Oceanic Atmospheric Administration, and NSF, and many others. This shortsighted abandonment of our investment in science can only harm our economy, our health, our world leadership, and our ability to innovate in the middle and long term.

The National Science Foundation plays the fundamental, foundational role in funding scientific research in the United States. Sine qua non. The NSF builds our scientific knowledge, improves our security, expands our economy, and helps our nation compete technologically with the world. Each year the NSF provides more than $7 billion in approximately 12,000 new grant awards to nearly 2,000 institutions. The NSF accounts for nearly one-quarter of all federal research funding for basic science conducted by America's colleges and universities.

I don't think any Member of Congress is opposed to exploring reasonable and responsible opportunities to ensure federal funds are spent as effectively and efficiently as possible. Improvements in financial management are always possible and should be pursued. But let's be fully aware of the unintended consequences of our actions. Let's be certain any changes we make keep the best scientists doing the most important work on the National Science Foundation team. Let's make sure we are not initiating a race to the bottom, with prizes to the lowest bidder doing the least valuable research.

I look forward to hearing the testimony of our witnesses. I trust we will have a constructive dialogue about the important role the federal government plays in funding scientific research and just how we can make that process as effective and efficient as possible.

Thank you. I yield back.

Chairwoman COMSTOCK. Thank you, and I would point out that the Administration's budget proposal, like every other President's, is just a proposal, and Congress gets to decide on that, and this Committee has had a very strong record of supporting science and research.

So I now recognize Chairman Smith for his statement.

Chairman SMITH. Thank you, Madam Chair.

Congress allocates more than $6 billion per year of taxpayers' money to the National Science Foundation to support scientific research and education at universities and nonprofits. This investment contributes to American innovation, economic competitiveness and national security.

Congress also authorizes the NSF and other federal science agencies to reimburse universities and nonprofit research institutions for the overhead expenses they incur for federally supported research projects. These are called indirect costs. Indirect costs are allowed in order to pay for such expenses as light and water bills for university laboratories, security services, and compliance with federal regulations.

However, indirect costs have expanded and expanded again. One point three billion dollars of National Science Foundation's current annual research budget is now consumed by indirect cost payments to universities and research institutions. That is almost one-quarter of National Science Foundation's research budget. One point three billion dollars would pay for 2,000 more scientific research projects in critical areas like physics, biology, computer science and engineering. Science and innovation in these fields will improve our future economic and national security.

Universities and non-profits should certainly be reimbursed for reasonable costs of sponsoring federal-funded research. However, as we will hear today from the GAO, ongoing indirect costs consume a larger and larger share of funds for scientific research, and many universities are pressing to raise indirect costs even higher. In fact, some indirect costs rates have now reached 50 percent of the grant and higher.

There is no question that there are legitimate costs associated with carrying out the best research in the world. The question is, are taxpayers paying for these costs in an efficient and transparent manner, or are we unnecessarily subsidizing excess, bureaucracy and waste? Or is the National Science Foundation becoming just another source of revenue?

I recently met with a university president who described having to spend $1 million to build a new lab in order to recruit a high-profile scientist from another institution. Why should taxpayers foot the bill for this scenario?

Another ongoing investigation of a researcher, who received millions in NSF grants over the years, revealed that he used indirect funding to pay his salary as president of the nonprofit institution as well as administrative salaries for his family members. Why was this allowed to happen, and how does National Science Foundation monitor the use of indirect funds?

Our challenge is to ensure America remains first in the global marketplace of ideas and products, without misusing taxpayer dollars. We must conduct research efficiently and responsibly so that

taxpayers know they are getting good value for their investment in our nation's scientific research and innovation effort.

Madam Chair, I look forward to hearing from our panel of witnesses today about how indirect cost rates are negotiated and monitored, how the funding is used, and how we can better control overhead costs, including possible caps or other limitations.

I'll yield back.

[The prepared statement of Chairman Smith follows:]

COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY
Lamar Smith, Chairman

For Immediate Release
May 24, 2017

Media Contact: Kristina Baum
(202) 225-6371

Statement of Chairman Lamar Smith (R-Texas)
Examining the Overhead Cost of Research

Chairman Smith: Congress allocates more than $6 billion per year of taxpayers' money to the National Science Foundation (NSF) to support scientific research and education at universities and non-profits.

This investment contributes to American innovation, economic competitiveness and national security.

Congress also authorizes the NSF and other federal science agencies to reimburse universities and non-profit research institutions for the overhead expenses they incur for federally supported research projects – called indirect costs.

Indirect costs are allowed in order to pay for such expenses as light and water bills for university laboratories, security services, and compliance with federal regulations.

However, indirect costs have expanded and expanded again. $1.3 billion of NSF's current annual research budget is now consumed by indirect cost payments to universities and research institutions. That is almost one-quarter of NSF's research budget.

$1.3 billion would pay for 2,000 more scientific research projects in critical areas like physics, biology, computer science and engineering. Science and innovation in these fields will improve our future economic and national security.

Universities and non-profits should certainly be reimbursed for reasonable costs of sponsoring federal-funded research.

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There is no question that there are legitimate costs associated with carrying out the best research in the world. The question is, are taxpayers paying for these costs in an efficient and transparent manner, or are we unnecessarily subsidizing excess, bureaucracy and waste? Or is the NSF becoming just another source of revenue?

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Another ongoing investigation of a researcher, who received millions in NSF grants over the years, revealed that he used indirect funding to pay his salary as president of the non-profit institution as well as administrative salaries for his family members. Why was this allowed to happen, and how does NSF monitor the use of indirect funds?

Our challenge is to ensure America remains first in the global marketplace of ideas and products, without misusing taxpayer dollars.

We must conduct research efficiently and responsibly so that taxpayers know they are getting good value for their investment in our nation's scientific research and innovation effort.

I look forward to hearing from our panel of witnesses about how indirect cost rates are negotiated and monitored, how the funding is used, and how we can better control overhead costs, including possible caps or other limitations.

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Chairwoman COMSTOCK. I now recognize briefly Mr. Perlmutter for an introduction.

Mr. PERLMUTTER. Thanks, Madam Chairwoman, and I appreciate the moment of personal privilege.

The Chairwoman was bragging a little bit about George Mason. My friends, Mr. LaHood and Lipinski, were bragging about the University of Illinois.

Chairman SMITH. Here it comes.

Mr. PERLMUTTER. Well, I actually get to brag about the University of Colorado. There are five budding scientists from the university here today in physiology, molecular, cellular and developmental biology, neuroscience, public health, and environmental biology. So if the students from the University of Colorado CU Boulder, would you please stand so everybody can see you?

So my university takes these subjects very seriously, and I'd just like to thank you all for being here and listening to this, what is kind of a dry subject but very important to universities and how they receive their grants.

So thank you for being scientists, thank you for coming to the Congress of the United States and listening to the Science Committee.

And with that, I'd yield back to the Chairwoman.

Chairwoman COMSTOCK. Thank you, and I appreciate the students. Welcome, and nice to see so many young women scientists here. So thank you.

I'll now introduce our witnesses. Our first witness today is Mr. Dale Bell, Division Director for Institution and Award Support at the National Science Foundation. In this position, Mr. Bell provides oversight across NSF's financial assistance awards through NSF policy and business systems requirements as well as cost analysis and awardee monitoring. Prior to NSF, Mr. Bell worked across the federal sector as a consultant for program execution management and strategic planning. He has a bachelor's degree in political science from the Johns Hopkins University and a master's degree from Georgetown University School of Business.

Our second today is Mr. John Neumann, Director of Natural Resources and Environment at the U.S. Government Accountability Office. With over 25 years of experience, he leads auditing efforts in the science and technology area including the management and oversight of federal research and development programs, protection of intellectual property, and federal efforts to support innovation. He graduated cum laude with a Bachelor of Arts degree in political science from the State University of New York at Stony Brook and holds a master's of business administration from American University. Mr. Neumann also earned a juris doctorate from Georgetown University.

Our third witness today is Mr. James Luther, Associate Vice President of Finance and Compliance at Duke University. He also serves as Chairman of the Board of the Council on Governmental Relations. Mr. Luther's responsibilities include post-award areas in asset management oversight for the University and School of Medicine, negotiation of Duke's indirect cost and fringe benefit rates, and all aspects of Duke's research costing compliance program. He

earned his bachelor's of science in engineering from the United States Naval Academy and a master of arts from Duke.

Our fourth witness today is Dr. Richard Vedder, Distinguished Professor of Economics Emeritus at Ohio University, in Athens, Ohio. Dr. Vedder has been an economist with the Joint Economic Committee of Congress, a Fellow of the George W. Bush Institute, and an Adjunct Scholar at the American Enterprise Institute. He also directs the Center for College Affordability and Productivity. Dr. Vetter has written over 100 scholarly papers published in academic journals and books on the U.S. economy and public policy including the book Going Broke by Degree: Why College Costs Too Much. He received his Ph.D. in economics from the University of Illinois.

I now recognize Mr. Bell for five minutes to present his testimony.

TESTIMONY OF MR. DALE BELL,
DIVISION DIRECTOR,
INSTITUTION AND AWARD SUPPORT,
NATIONAL SCIENCE FOUNDATION

Mr. BELL. Chairman Smith, Chairman Comstock, Ranking Member Lipinski, Chairman LaHood, Ranking Member Beyer, and distinguished members of the Research and Technology and Oversight Committees. My name is Dale Bell, and I serve as the Division Director for the Division of Institution and Award Support at the National Science Foundation. I appreciate the opportunity to testify before you this morning, and I'd like to say that this is a sexy topic for me, so thank you for the opportunity.

Since its establishment in 1950, the mission of NSF has been to promote the progress of science, to advance the national health, prosperity and welfare, and to secure the national defense. To do so, NSF awards grants and cooperative agreements with an eye toward advancing the scientific frontier to approximately 2,000 organizations consisting of colleges, universities, K–12 school systems, businesses, science associations, and other research organizations.

The federally sponsored research enterprise is a partnership between the federal government and the institutions performing the research. Both are committed to achieving mutually beneficial outcomes and both agree to share in the cost of enterprise that enables this research.

NSF reimburses awardees for direct costs such as salaries, equipment and travel that can be attributed to a specific project. NSF also funds indirect costs. Some call these overhead or facilities administration. These are costs which are not readily identifiable with a specific research project but are still necessary for the general operation to carry out the research. Examples of indirect costs may include laboratory occupancy costs, hazardous chemical and biological agent management, libraries, IT systems, data transmission and storage, radiation safety, insurance, administrative services, and compliance with government regulations including institutional review boards for human subject research. Note that only resources used for research are counted, and the federal government partially reimburses awardees for these expenses through the use of an indirect cost rate.

The amount of indirect costs budgeted to NSF awards has remained stable. Recent NSF analysis of data developed in the course of the GAO audit shows that annual funding for indirect costs across NSF's entire portfolio of awards averaged about 20 percent of the total amount awarded over the last 17 years.

NSF does not negotiate indirect cost rates for colleges and universities, which make up about 91 percent of NSF's awardees. Per the Office of Management and Budget's Uniform Guidance, indirect cost rate negotiation cognizance for all colleges and universities is assigned to the Department of Health and Human Services or the Department of Defense's Office of Naval Research.

NSF is the cognizant agency for negotiating indirect cost rates for about 100 of its over 2,000 awardee organizations, or about five percent. To put this in perspective, of the approximately 45,000 awards in NSF's active portfolio, over 98 percent were made to organizations that negotiate indirect cost rate agreements with other federal agencies.

Organizations for which NSF is the cognizant agency largely consistent of nonprofits such as independent research institutions, laboratories, museums, professional scientific societies, and foundations.

Accountability over indirect cost starts with the rate negotiation process. OMB Uniform Guidance sets requirements to be applied by all federal agencies. All entities for which has NSF has rate cognizance as required to regularly submit indirect cost rate proposals for review.

Calculating an indirect cost rate is an involved process. The negotiation process begins with submission of indirect cost rate proposals and supporting documentation. A rate negotiator, an expert in cost analysis, reconciles the proposal with the organization's audited financial statements and other financial information and ensures that costs have been allocated in accordance with the Uniform Guidance.

NSF exercises various forms of oversight over the application of the indirect cost rate. This includes single audits, incurred cost audits and other post-award monitoring efforts. In addition, NSF monitors the use of indirect costs through transaction testing as required under its implementation of the Improper Payments Act.

Excellence in stewardship is an NSF strategic goal. The agency welcomes the oversight provided by this Committee and the GAO.

NSF has already strengthened its internal procedures related to the indirect cost rate negotiation process as a result of the GAO engagement, and we remain a fully engaged partner in ensuring accountability for taxpayer investments in the federal research enterprise.

This concludes my oral testimony. More detail on the points I briefly highlighted today can be found in my written statement. I would be pleased to answer any questions you may have. Thank you.

[The prepared statement of Mr. Bell follows:]

Testimony of

William Bell
Division Director
Division of Institution and Award Support
National Science Foundation

Before the
Subcommittee on Research and Technology
and the
Subcommittee on Oversight

for the
Committee on Science, Space, and Technology
U.S. House of Representatives

May 24, 2017

"Examining the Overhead Cost of Research"

Madam Chairwoman, Mr. Chairman, and other distinguished members of the Research and Technology and Oversight Subcommittees, thank you for this opportunity to testify before you today. My name is Dale Bell and I have served as the National Science Foundation's (NSF) Division Director for the Division of Institution and Award Support since 2015, previously serving as Deputy Division Director since 2010.

Since its establishment in 1950, the mission of NSF has been "to promote the progress of science; to advance the national health, prosperity and welfare; [and] to secure the national defense…" To do so, NSF has provided funding with an eye toward advancing the scientific frontier by investing in the most innovative and promising new research and education projects. NSF does this by awarding grants and cooperative agreements to approximately 2,000 organizations consisting of colleges, universities, K-12 school systems, businesses, science associations, and other research organizations.

The grants and cooperative agreements that NSF awards to our Nation's universities, colleges, and other organizations are considered "assistance awards." Those are awards that "entail the transfer of money, property, services or other things of value from the Federal Government to a State or local government or other recipient to accomplish a public purpose of support or stimulation. Assistance awards involve the support or stimulation of scientific and engineering research, science and engineering education or other related activities."[1] Those grants and cooperative agreements include direct costs and indirect costs. I wish to emphasize that for our universities to be able to conduct the cutting-edge research that they do, both the direct and indirect are real costs that are essential to the conduct of research. Federally sponsored research is fundamentally a partnership between the Federal Government and institutions performing the research. Both are committed to achieving mutually beneficial outcomes, and both have demonstrated agreement to share in the costs of the enterprise. Studies have concluded that federal research grants cost universities more than is recouped through the direct and indirect costs, though measuring those costs is so complex that no definitive data is yet available. If the government does not pay for all costs associated with federally funded research, other entities will have to bear them, in effect subsidizing the federal government. Those costs may be borne through general fund dollars which include tuition, philanthropy, and other sources. Private sector funding of research – which is considerably less, in aggregate, then federal funding – generally does not carry indirect costs, or uses lower indirect cost rates. "Richer" institutions can make up additional indirect costs by utilizing endowments, but those sources are not always available in smaller institutions, minority serving institutions, and public universities.

Because the vast majority of NSF's funding goes directly to the Nation's universities and colleges through awards and cooperative agreements, NSF is mindful of the agency's responsibility to be a careful steward of taxpayer dollars. We were pleased that the American Innovation and Competitiveness Act (AICA) recognized the importance of reducing administrative burdens on federally funded researchers – while continuing to protect the public interest through the transparency of, and accountability for, federally funded activities. NSF looks forward to participating in the interagency working group that the Office of Management and Budget (OMB) is tasked with leading under the AICA.

The Members of this Committee, the NSF Office of Inspector General (OIG), and the Government Accountability Office (GAO) have all been helpful in supporting the agency's efforts to strengthen stewardship over taxpayer investments in the research enterprise. NSF looks forward to the release of the forthcoming GAO report that the Committee requested, which reviewed the processes and practices with which NSF determines indirect cost rates, to help ensure efficient and effective use of taxpayer dollars for science research and education. NSF appreciates the considerable study undertaken by the GAO on this topic.

Indirect costs are real and necessary costs of conducting research. They represent expenditures for shared services (e.g., facilities, laboratory supplies, utilities, computer networking, data storage, administrative support, government-mandated audits) incurred in the performance of, and integral to, research. The Federal Government has a longstanding practice of funding both direct and indirect costs. Unless paired with reductions in regulatory and administrative burdens, curtailing or ceasing reimbursement of indirect costs could include increases in tuition and adverse impacts on less well-endowed institutions (e.g., minority serving institutions, and two-year colleges).

[1] Federal Grant and Cooperative Agreement Act (31 U.S.C., 6301-08).

Background

I will provide an overview here of how NSF reimburses indirect costs. Our practices and policies are described in NSF's *Proposal and Award Policies and Procedures Guide* (PAPPG), along with NSF's *Grant General Conditions*, and the Office of Management and Budget's (OMB*) Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*[2] *(Uniform Guidance).*

NSF reimburses awardees for direct costs, such as salaries, equipment, and travel that can be attributed to a specific project. NSF also funds indirect costs, which are those costs which are not readily identifiable with a particular cost objective directly tied to a specific research project, but that are necessary for the general operation of an organization and are difficult to allocate to individual research awards. Examples of indirect costs may include laboratory occupancy costs (rent, utilities, office supplies), hazardous chemical and biological agency management, libraries, internet, data transmission and storage, radiation safety, insurance, administrative services, and compliance with federal, state, and local regulations (e.g. Institutional Review Boards for human subject or animal research). Note that only resources utilized for research are counted, and the federal government partially reimburses awardees for these expenses.

Indirect costs are charged to federal awards through the use of an indirect cost rate. The indirect cost rate is used as a means to reimburse the awardee organization for the portion of shared expenses that the sponsored project used in the course of conducting its research and do not represent profit or fee. To calculate its indirect cost rate, the organization divides its claimed indirect costs (the indirect pool) by an equitable distribution base (the direct cost base). This calculation is done at the organization level; not on an award-by-award basis. The resulting percentage is the proposed indirect cost rate.

Specific guidelines for the construction of both the pool and the base are contained within the *Uniform Guidance*. Indirect cost rates for individual institutions are generally negotiated annually on behalf of the Federal Government by the cognizant agency for indirect costs. Per the *Uniform Guidance*, the cognizant agency is the federal agency that provides the predominance of direct federal funding to an awardee in a given year. The *Uniform Guidance* requires that the rate negotiated by the cognizant agency must be accepted by all federal agencies, except in certain circumstances where a different rate may be required by Federal statute or regulation. NSF complies with this requirement, and requires awardee organizations to charge indirect costs to NSF awards using the rates established by their cognizant federal agency.

NSF-Funded Indirect Costs

The amount of indirect costs budgeted to NSF awards has remained stable. Recent NSF analysis[3] of data developed in the course of the GAO audit shows that annual funding for indirect costs across NSF's entire portfolio of awards averaged 20 percent of the total amount awarded over the 17-year period from fiscal year 2000 to fiscal year 2016. NSF's current active award portfolio consists of approximately 45,000 awards. Of NSF's total funding obligation of $37.4 billion to support this portfolio, $7.3 billion (19.5%) has been requested for indirect costs.[4]

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[2] NSF Proposal & Award Policies & Procedures Guide (NSF 17-1, January 30, 2017); see https://www.nsf.gov/pubs/policydocs/pappg17_1/index.jsp. Office of Management and Budget, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, 2 CFR 200, (Washington, D.C.: December 2014).
[3] GAO Analysis of data provided by National Science Foundation.
[4] NSF makes most of its awards for multiple years. Therefore, NSF's active portfolio—awards currently being expended—includes more awards than NSF makes in a given year. NSF's active portfolio includes all current awards regardless of the fiscal year in which they were made, and it continuously changes as new awards are made and previous years' awards are closed.

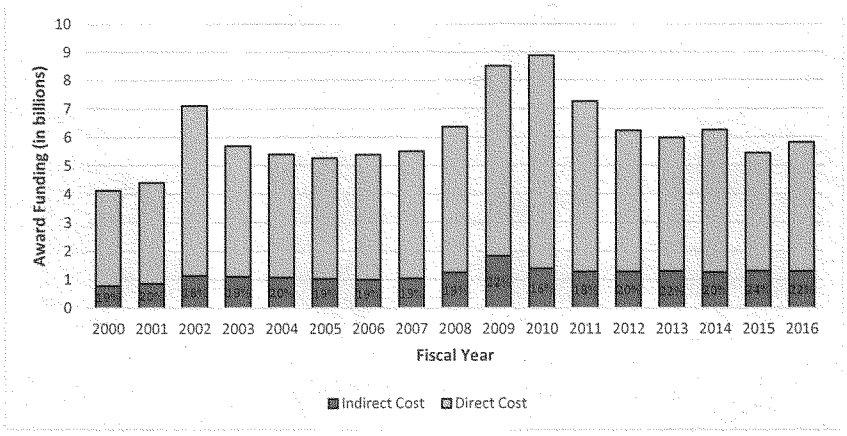


Figure 1: Analysis of NSF-Funded Direct and Indirect Costs, Fiscal Years 2000-2016

NSF is the cognizant agency for negotiating indirect costs for only 100 of its over 2,000 awardee organizations. Of the approximately 45,000 awards in NSF's current portfolio, 98.5% were made to organizations that negotiate indirect cost rate agreements with other federal agencies. Organizations for which NSF holds indirect cost rate cognizance consist of non-profit organizations, such as independent research institutes, laboratories, museums, and professional scientific societies, foundations, and consortiums.

Unlike many other federal agencies, NSF does not hire researchers or directly operate laboratories or similar facilities. Instead, NSF supports scientists, engineers and educators directly through their home institutions (typically colleges and universities). Colleges and universities comprise 91% of NSF's awardees.

NSF does not negotiate indirect cost rates for colleges and universities. Per the *Uniform Guidance*, indirect cost rate negotiation cognizance for all Institutions of Higher Education (IHEs) is assigned to the Department of Health and Human Services (HHS) or the Department of Defense's Office of Naval Research (DoD), depending on which of the two agencies (HHS or DoD) provides more funds to the educational institution for the most recent three years. Indirect cost rates negotiated for colleges and universities are regulated by the *Uniform Guidance*, which requires that institutions identify indirect costs by cost groupings – Depreciation, Interest, Operation and Maintenance Expenses, General Administration and General Expenses, Departmental Administration Expenses, Sponsored Projects Administration, Library Expenses, and Student Administration and Services. The *Uniform Guidance* sets a recovery cap of 26% on all administrative components of the indirect costs; any indirect costs exceeding the 26% cap are absorbed by the IHE. This cap on administrative costs has been in place since 1991.

Oversight, Accountability, and Stewardship

Accountability over indirect costs starts with the rate negotiation process. The *Uniform Guidance* sets requirements to be applied by all Federal agencies. All entities for which NSF has rate cognizance are required to regularly submit indirect cost rate proposals for review. The negotiation process[5] begins with submission of that proposal and supporting documentation. The proposal contains a calculated indirect cost rate based on actual cost data for a period (usually the organization's fiscal year), schedules that support the rate calculation, a Cost Policy Statement (CPS) or similar document that states how categories of costs are accounted for at the organization, actual financial data (audited financial statements and/or tax returns), single audit reports, and organizational policies and procedures. A Certification of Indirect Costs, mandated by the *Uniform Guidance*, requires the organization to certify that the proposal has been prepared in accordance with the prevailing cost principles, has been screened for unallowable and unallocable costs, and assurance that costs incurred in support of lobbying activities have been removed from the indirect cost pool.

When reviewing a proposal from an organization for which NSF is the cognizant agency, a rate negotiator, an expert in cost analysis, verifies reconciliation of the rate calculation to the financial data provided and accuracy of the rate itself, especially ensuring that costs have been allocated as indirect, direct, or excluded in accordance with the *Uniform Guidance* or prevailing cost principles. The rate negotiator also reviews the costs included in the indirect cost pool to screen for any potential unallowable costs that may not have been removed, and to confirm that the calculation has been constructed in a manner consistent with the organization's CPS. A trend analysis is also constructed, which allows the rate negotiator to identify any large increases or decreases to individual components of the pool. Based on this analysis, the negotiator recommends adjustments to both the pool and the base. The resulting negotiated rate is issued to the awardee using a Negotiated Indirect Cost Rate Agreement (NICRA) which is signed by NSF officials and the organization. The NICRA is honored by all federal agencies going forward, consistent with the *Uniform Guidance*. Indirect cost rates are negotiated for a defined period of time, generally the organization's fiscal year. Typically, an organization initiates a new indirect cost rate negotiation annually. NSF documents its indirect cost rate negotiation process in standard operating guidance, which are reviewed annually as part of NSF's internal control framework.

NSF exercises oversight of the application of indirect cost rates primarily through the audit process. Single Audit requirements under the *Uniform Guidance* (previously OMB circular A-133 / Single Audit Act) outline steps to be taken by the independent audit firm specific to indirect costs. These steps include review of the indirect cost rate calculation (pool and base) and application of the approved rate to claimed indirect costs on individual awards. Single Audits are required for awardee organizations, excluding for-profits, that expend more than $750,000 in federal resources during the previous fiscal year. In addition to Single Audits, NSF Management procures its own audits of selected Large Facility Projects. These audits include an assessment of incurred costs for construction and operations. Incurred cost audits include a review of direct and indirect costs claimed. The NSF OIG Audit Office also performs incurred cost audits of NSF awardees. NSF Management is responsible for resolving all issues raised in these audit reports. NSF post-award advanced monitoring efforts includes site visits and desk reviews of awardee organizations that manage NSF's highest risk awards. These activities may include a module verifying amounts drawn down on NSF awards which would entail a verification of appropriate application of the indirect cost rate.

[5] See http://www.nsf.gov/bfa/dias/caar/docs/idcsubmissions.pdf for indirect cost rate proposal submission requirements.

In addition, NSF transaction testing under its implementation of the Improper Payments Act includes monitoring of indirect costs. If selected transactions represent charges for indirect costs then the review would include verification of the awardees' use of the appropriate indirect cost rate application.

Excellence in stewardship is an NSF strategic goal. The agency welcomes the oversight provided by this Committee, the NSF OIG, and the GAO, and remains a fully engaged partner in ensuring accountability for taxpayer investments in the federal research enterprise.

Conclusion

Madam Chairwoman, Mr. Chairman, and members of the Subcommittees, I hope my testimony clearly explains NSF's policies and role in negotiating and monitoring indirect costs. I hope too that I have been clear that the total NSF investment – both the direct and indirect costs – are critical to the ongoing advancement of US science. This concludes my testimony. I will be pleased to answer any questions the Members may have.

William Bell
Division Director
Division of Institution and Award Support
National Science Foundation

Mr. William (Dale) Bell currently serves as Division Director for Institution and Award Support (DIAS) at the National Science Foundation (NSF), a position he has held since July 2015. Mr. Bell served as Deputy Division Director of DIAS beginning in February 2010. Through the Division, Mr. Bell provides oversight across the lifecycle of NSF's financial assistance awards through the development and implementation of NSF policy and business systems requirements, as well as cost analysis and awardee monitoring.

Prior to NSF, Dale worked across the federal sector as a consultant specializing in program execution, enterprise performance management, and strategic planning. He guided a number of federal programs through alignment of shared goals, strategic planning, and the establishment of effective performance measurements and management processes that drive performance. Positions included Principal at the SRA Touchstone Consulting Group, Senior Manager at the Unisys Corporation, and Manager at Andersen Office of Government Services.

Mr. Bell has a Bachelor's degree in Political Science from the Johns Hopkins University, and a Master's degree from Georgetown University's School of Business.

Chairwoman COMSTOCK. Thank you.
And we now recognize Mr. Neumann.

TESTIMONY OF MR. JOHN NEUMANN, DIRECTOR, NATURAL RESOURCES AND ENVIRONMENT, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Mr. NEUMANN. Thank you. Chairwoman Comstock, Chairman LaHood, Chairman Smith, Ranking Members Lipinski and Beyer, and members of the Subcommittee, thank you for the opportunity to be here today to discuss our ongoing work on the National Science Foundation's oversight of indirect costs on awards for scientific research and education.

NSF funds billions of dollars in awards each year to universities, elementary school systems, science associations, and other research organizations. For most awards, NSF reimburses awardees for both direct and indirect costs incurred. Direct costs such as salaries and equipment are those that can be attributed to a specific research project. Indirect costs are those that cover the genera operation of an awardee's organization such as the cost of operating and maintaining facilities or the salaries and expenses for general administration.

Today I'd like to provide some preliminary observations from our ongoing work that is focused on two areas: first, what is known about indirect costs of NSF awards over time, and secondly, the extent to which NSF has implemented guidance for setting indirect cost rates for the organizations it's responsible for.

Our first preliminary observation is that indirect costs on an NSF award range from 16 to 24 percent of the total amounts the agency awarded each year from 2000 to 2016. NSF has provided some explanation for the variation in indirect costs from year to year, and we are continuing to evaluate those factors.

Another observation related to this variation is that the average indirect costs also varied across types of awardees which included universities, small businesses, industry and others. Specifically, we observed that in fiscal year 2016, university awardees had the highest average indirect costs, about 27 percent, while industry had lower average indirect costs of 14 percent, and we're continuing to evaluate the reasons for that as well.

I should also note that our preliminary analysis of indirect costs is based on NSF budget data because NSF doesn't require awardees to report information about actual indirect costs separately from direct costs when requesting reimbursement for work done on a specific award.

In our review of NSF's guidance for setting indirect cost rates for the organizations it's responsible for, we also had several observation including that NSF staff did not consistently implement the guidance and the guidance itself did not include certain details. For example, in 2008, NSF created a database for tracking its active indirect cost rate proposals in response to recommendations made by the NSF Inspector General in a prior audit. However, NSF staff haven't consistently updated the data in its tracking system to reflect the current status of its indirect cost rate proposals.

Also, we observed that NSF guidance does not describe specific steps for supervisor review of the indirect cost rate proposals to en-

sure that only allowable and reasonable indirect costs have been proposed for NSF awards.

Lastly, we observed that NSF's guidance has not been updated to reflect changes from OMB's Uniform Guidance for Federal Awards, which became effective at the end of 2014.

In closing, I would note that we're continuing our ongoing work to examine NSF's data on indirect costs over time and its implementation of its guidance for setting indirect cost rates. As you know, NSF awards billions of dollars to organizations each year and it's essential that NSF ensures efficient and effective use of the federal science funding through its oversight of indirect costs.

This concludes my prepared remarks. I'm happy to respond to any questions you may have.

[The prepared statement of Mr. Neumann follows:]

United States Government Accountability Office

Testimony before the Subcommittee on Research and Technology and the Subcommittee on Oversight, Committee on Science, Space, and Technology, House of Representatives

For Release on Delivery
Expected at 10:00 a.m. ET
Wednesday, May 24th, 2017

NATIONAL SCIENCE FOUNDATION

Preliminary Observations on Indirect Costs for Research

Statement of John Neumann, Director,
Natural Resources and Environment

GAO Highlights

Highlights of GAO-17-576T, a testimony before the Subcommittee on Research and Technology, and the Subcommittee on Oversight, Committee on Science, Space, and Technology, House of Representatives

Why GAO Did This Study

NSF awards billions of dollars to institutions of higher education (universities), K-12 school systems, industry, science associations, and other research organizations to promote scientific progress by supporting research and education.

NSF reimburses awardees for direct and indirect costs incurred for most awards. Direct costs, such as salaries and equipment, can be attributed to a specific project that receives an NSF award. Indirect costs are not directly attributable to a specific project but are necessary for the general operation of an awardee organization, such as the costs of operating and maintaining facilities. For certain organizations, NSF also negotiates indirect cost rate agreements, which are then used for calculating reimbursements for indirect costs. Indirect cost rate negotiations and reimbursements are to be made in accordance with federal guidance and regulation and NSF policy.

This testimony reflects GAO's preliminary observations from its ongoing review that examines (1) what is known about NSF's indirect costs for its awards over time, and (2) the extent to which NSF has implemented guidance for setting indirect cost rates for organizations. GAO reviewed relevant regulation, guidance, and agency documents; analyzed budget data; a nongeneralizable sample of nine indirect cost rate files from fiscal year 2016 selected based on award funding; and interviewed NSF officials.

What GAO Recommends

GAO is not making any recommendations in this testimony but will consider making recommendations, as appropriate, as it finalizes its work.

View GAO-17-576T. For more information, contact John Neumann at (202) 512-3841 or neumannj@gao.gov.

May 24, 2017

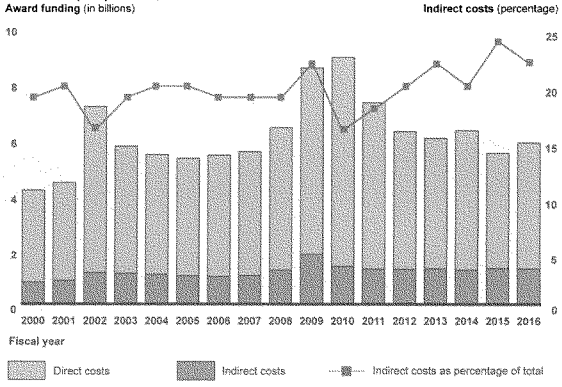
NATIONAL SCIENCE FOUNDATION

Preliminary Observations on Indirect Costs for Research

What GAO Found

GAO's preliminary analysis of National Science Foundation (NSF) data indicates that for fiscal years 2000 through 2016, indirect costs on NSF awards ranged from 16 percent to 24 percent of the total annual amounts awarded, though the percentage generally has increased since 2010 (see fig.). NSF officials stated that variation in indirect costs from year to year can be due to a variety of reasons, such as the types of organizations awarded and the disciplinary field of awards. GAO's observations are based on data from planned budgets on individual NSF awards, rather than actual indirect cost expenditures, because NSF does not require awardees to report indirect costs separately from direct costs in their reimbursement requests. According to NSF officials, collecting such information would unnecessarily increase the reporting burden on awardees.

Preliminary Analysis of Annual Direct and Indirect Costs Budgeted on National Science Foundation (NSF) Awards, Fiscal Years 2000-2016



Source: GAO analysis of NSF data. | GAO-17-576T

NSF has issued guidance for negotiating indirect cost rate agreements that includes procedures for staff to conduct timely and uniform reviews of indirect cost rate proposals. GAO's preliminary review of NSF's guidance and a sample of nine indirect cost rate files found that (1) NSF staff did not consistently follow guidance for updating the agency's tracking database with current data about some awardees, (2) the guidance did not include specific procedures for how supervisors are to document their review of staff workpapers, and (3) NSF had not updated the guidance to include procedures for implementing certain aspects of Office of Management and Budget guidance that became effective for grants awarded on or after December 26, 2014, such as the circumstances in which NSF can provide an awardee with an extension of indirect cost rates.

Chairwoman Comstock, Chairman LaHood, Ranking Members Lipinski and Beyer, and Members of the Subcommittees:

I am pleased to be here today to provide some preliminary observations from our ongoing review of the National Science Foundation's (NSF) oversight of indirect costs on awards to promote scientific progress by supporting research and education.[1] NSF funds billions of dollars in awards each year to institutions of higher education (universities), K-12 school systems, industry, science associations, and other research organizations. For example, NSF funds awards to support research on improving earthquake predictions; programs for increasing the number of students in science fields; and translation and online dissemination of scholarly research as a resource for scientists, historians, educators, and people involved in other areas of inquiry.

For most awards, NSF reimburses awardees for both direct and indirect costs incurred. Direct costs, such as salaries and equipment, can be attributed to a specific project that receives an NSF award. Indirect costs are not directly attributable to a specific project but are necessary for the general operation of an awardee organization. Such costs can include depreciation on buildings and equipment; the costs of operating and maintaining facilities; and general administration and expenses, such as salaries and expenses for management, personnel administration, and accounting.

To be reimbursed for indirect costs, organizations must properly identify and claim reimbursement for these costs in accordance with applicable federal guidance. The Office of Management and Budget's (OMB) *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance);[2] the Federal Acquisition Regulation;[3] and NSF implementing policy govern how NSF is to reimburse indirect costs.

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[1]NSF awards include grants and cooperative agreements. A grant provides a specific level of support for an awardee to carry out an activity for a specified period of time. A cooperative agreement differs from a grant in that it provides for substantial involvement between NSF and the awardee in carrying out the activity supported by the award.

[2]Office of Management and Budget, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, 2 C.F.R. § 200 (Washington, D.C.: December 2014). In December 2014, NSF and other federal awarding agencies issued a joint interim final rule to implement this Uniform Guidance by incorporating it into their respective regulations for grants and agreements. NSF requested special accommodation from OMB with respect to the format of its implementing language. Specifically, NSF received approval from OMB to implement the Uniform Guidance using a policy rather than a regulation.

[3]Federal Acquisition Regulation, 48 C.F.R. pt. 31, *Contract Cost Principles and Procedures*, applies to for-profit organizations.

Under the Uniform Guidance and federal regulations, for an organization to be reimbursed for indirect costs, it generally must have a negotiated indirect cost rate agreement with its cognizant agency for indirect costs—the federal agency that is responsible for reviewing, negotiating, and approving the organization's indirect cost rate.[4] Because indirect costs cannot be specifically attributed to a particular research grant or cooperative agreement, they are allocated via an indirect cost rate that is applied to certain direct costs for each awarded grant. Federal agencies then use the indirect cost rate to reimburse indirect costs to the organization. The rate applies to all of the organization's federal awards that are eligible for indirect costs, even if some awards are made by agencies other than the cognizant agency.

NSF is the cognizant agency for certain organizations, particularly nonprofits, but not for universities. For nonprofit organizations, the Uniform Guidance assigns cognizance to the federal agency with the largest dollar value of federal awards given to the organization unless different arrangements are agreed upon by the federal agencies concerned.[5] As of February 2017, NSF's Cost Analysis and Audit Resolution Branch had cognizance over approximately 110 organizations, mostly nonprofit and professional societies, museums, and operators of large shared-use facilities (such as accelerators, telescopes, and research vessels) that receive the largest dollar value of their federal awards from NSF.[6] For universities, the Uniform Guidance assigns cognizance to the Department of Health and Human Services (HHS) or the Department of Defense (DOD), depending on which agency provided more funds to the university for the most recent 3 years.

To obtain an indirect cost rate, an organization submits a proposal with a proposed rate and supporting documentation (such as audited financial statements) to its cognizant agency. Generally, to calculate its proposed rate, an organization divides its total indirect costs (after adjustments) by the total direct costs across all of the organization's federal awards for a particular time period.[7] The resulting percentage is the proposed rate. After receiving a rate

[4]For the purposes of this testimony, the term cognizant agency refers to the federal agency with cognizance for indirect costs.

[5]Information on funding must be derived from relevant data gathered by NSF, according to the Uniform Guidance (2 C.F.R. § 200, Appendix III c(11)).

[6]According to NSF officials, the exact number of organizations for which NSF's Cost Analysis and Audit Resolution Branch has cognizance changes from year to year depending on how many organizations receive the largest dollar value of their federal awards from NSF.

[7]Adjustments include the removal of unallowable, unallocable, and unreasonable costs from the claimed indirect costs.

proposal, the cognizant agency is to verify the organization's mathematical accuracy, confirm that unallowable costs have been excluded in accordance with regulations and agency guidance, reconcile the cost proposal to the audited financial statements, and determine the reasonableness of the proposed costs. Once the proposal has been reviewed, the cognizant agency and the organization negotiate and finalize a rate. The rate is then documented in a formal agreement that sets the rate for a period of 1 to 4 years. This rate is used as a mechanism for determining the proportion of indirect costs that may be reimbursed for federally funded awards.

In prior reports, we have raised concerns about the growth of indirect costs and the process for setting indirect cost rates at the National Institutes of Health (NIH). In September 2013, we found that reimbursements for indirect costs increased faster than those for direct costs on NIH research grants awarded to universities for fiscal years 2002 through 2012.[8] In September 2016, we found deficiencies in cognizant agencies' design of internal controls for setting rates for organizations that received NIH awards.[9] We found that these deficiencies increased the risk that rates used by NIH would include inappropriate indirect costs and result in federal agencies paying more than their share of the organizations' indirect costs.

My statement today reflects our preliminary observations from our ongoing review that examines (1) what is known about indirect costs of NSF awards over time and (2) the extent to which NSF has implemented guidance for setting indirect cost rates for organizations over which it has cognizance. The information in this statement on NSF's indirect costs for its awards over time is based on our preliminary analysis of data from NSF award budgets that include the amount of direct and indirect costs on awards made from fiscal years 2000 through 2016. To assess the reliability of the data, we performed testing, including confirming that the data contained no outliers in the data fields we used, and we interviewed NSF officials. We found the data sufficiently reliable for the purposes of presenting indirect costs of NSF awards over time. We also interviewed NSF officials about award budgets and reimbursements, including budgets and reimbursements for indirect costs. To determine the extent to which NSF has implemented guidance for setting indirect cost rates for organizations over which it has cognizance, we reviewed OMB's Uniform Guidance, the Federal Acquisition Regulation, and *Standards for*

[8]GAO, *Biomedical Research: NIH Should Assess the Impact of Growth in Indirect Costs on Its Mission*, GAO-13-760 (Washington, D.C.: Sept. 24, 2013).

[9]GAO, *NIH Biomedical Research: Agencies Involved in the Indirect Cost Rate-Setting Process Need to Improve Control*, GAO-16-616 (Washington, D.C.: Sept. 7, 2016).

Internal Control in the Federal Government; reviewed NSF's guidance about the rate-setting process; and interviewed NSF officials.[10] To further examine how NSF has applied its guidance, we reviewed reports from the agency's database for tracking indirect cost rate proposals, and we selected a nongeneralizable sample of nine rate agreement case files from the total population of rate proposals received and closed in fiscal year 2016 and stratified the population by award funding (i.e., high, medium, and low). In particular, we selected three rate agreement case files from each of the populations to understand the extent to which NSF applied its guidance. Our findings are not generalizable to rate agreements we did not review, though they provide illustrative examples of rate agreement case files.

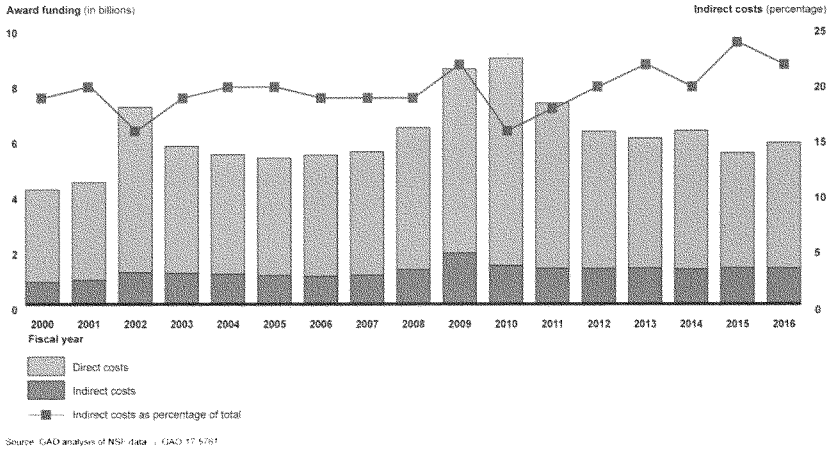
We are conducting the work upon which this statement is based in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. We shared the information in this statement with NSF to obtain its views, and NSF provided technical comments.

Indirect Costs on NSF Awards Ranged From 16 Percent to 24 Percent of Total Annual Award Funding from 2000 through 2016 and Differed by Type of Organization

Our preliminary analysis of NSF data indicates that for fiscal years 2000 through 2016, indirect costs on NSF awards ranged from 16 percent to 24 percent of the total annual amounts the agency awarded, though the percentage generally has increased since 2010. In fiscal year 2016, for example, NSF awards included approximately $1.3 billion budgeted for indirect costs, or about 22 percent of the total $5.8 billion that NSF awarded. Figure 1 illustrates annual funding for indirect costs over the 17-year period.

[10]GAO, *Standards for Internal Control in the Federal Government*, GAO-14-704G (Washington, D.C.: September 2014).

Figure 1: Preliminary Analysis of Annual Direct and Indirect Costs Budgeted on National Science Foundation (NSF) Awards, Fiscal Years 2000-2016



Source: GAO analysis of NSF data. | GAO-17-576T

Note: Award funding has not been adjusted for inflation.

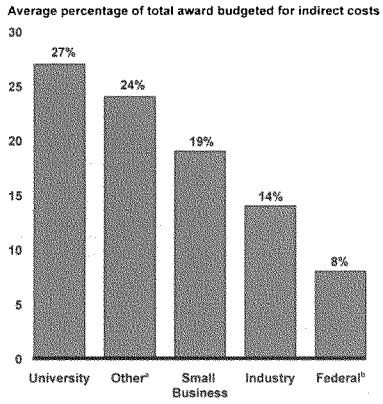
NSF officials told us that variation in indirect costs from year to year can be due to a variety of factors such as (1) differences in the types of organizations awarded, (2) the types of activities supported by the individual awards—research vs. individuals or students vs. infrastructure, (3) the type of research activity, and (4) the disciplinary field of awards. As part of our ongoing review, we plan to conduct further analysis of these factors.

The indirect costs on individual awards varied more widely than the year-to-year variations for each award. Most NSF awards included indirect costs in their budgets—for example, about 90 percent of the 12,013 awards that NSF made in fiscal year 2016 included indirect costs. Our preliminary analysis of those awards indicated that the proportion of funding for indirect costs ranged from less than 1 percent to 59 percent of the total award.[11]

Our preliminary analysis also indicates that average indirect costs budgeted on awards varied across types of awardees. NSF's data categorized awardees as federal; industry; small business; university; or other, a category that includes nonprofits and individual researchers. Figure 2 illustrates our preliminary analysis on the average percentage of total awards budgeted for indirect costs in fiscal year 2016, by type of awardee.

[11]NSF does not allow indirect costs on certain awards, such as awards that pay for the salaries of graduate students who participate in NSF-funded research. NSF awards made in fiscal year 2016 included 1,246 awards with no indirect costs (about 10 percent of total awards in fiscal year 2016).

Figure 2: Preliminary Analysis of Average Percentage of Total National Science Foundation (NSF) Awards Budgeted for Indirect Costs, by Awardee Type, Fiscal Year 2016



Source: GAO analysis of NSF data | GAO-17-576T

[a]Other includes nonprofit organizations and individual researchers.

[b]Federal includes some nonfederal entities such as the Federally Funded Research and Development Centers, which are public-private partnerships.

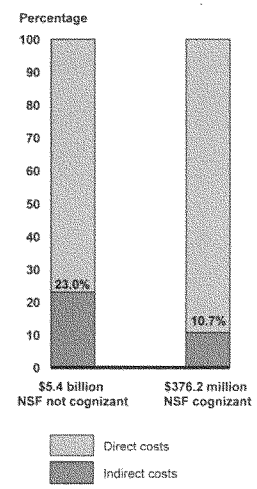
As shown in the figure, our preliminary analysis indicates that university awardees had the highest average indirect costs—about 27 percent of the total amount of awards—and federal awardees had the lowest average indirect costs—about 8 percent of the total amount of awards.[12] According to NSF officials, certain types of projects, such as those carried out at universities, typically involve more indirect costs than others. The officials said that this is because, for example, of universities' expense of maintaining scientific research facilities, which may be included as an indirect cost in awards.[13] Because universities receive the bulk of NSF's award funding and have relatively high indirect costs, our preliminary analysis of NSF data indicates that universities accounted for about 91 percent of the approximately $1.3 billion budgeted for indirect costs in fiscal year 2016. As previously noted, NSF does not set the indirect cost rate for the universities to which it makes awards, as those rates are set by HHS or DOD.

[12]NSF's federal category includes such entities as Federally Funded Research and Development Centers, which are sponsored by federal agencies for research and development tasks that are integral to their missions. The Department of Energy, DOD, and NSF sponsor the largest number of these entities by contracting with nonprofit, university-affiliated, or private industry operators.

[13]Because the Uniform Guidance allows flexibility in how organizations may categorize costs, the same type of cost, such as administrative support, may be categorized as direct by one organization and indirect by another.

Our analysis also showed that awards to organizations for which NSF had cognizance (e.g., nonprofits, professional societies, museums, and operators of large shared-use facilities) had lower average budgeted indirect costs than awards to organizations for which other federal agencies had cognizance. As shown in figure 3, our preliminary analysis of NSF data indicates that, on average, NSF budgeted about 23 percent of award amounts for indirect costs on awards to organizations for which NSF did not have indirect cost cognizance and about 11 percent for indirect costs on awards to organizations for which NSF had cognizance. Our preliminary observations show that in fiscal year 2016, NSF made most of its awards to organizations for which it did not have cognizance.

Figure 3: Preliminary Analysis of Average Percentage for Indirect Costs on Awards to Organizations for Which National Science Foundation (NSF) Does and Does Not Have Cognizance, Fiscal Year 2016



Source: GAO analysis of NSF data. | GAO-17-576T

Our preliminary observations show that among the approximately 110 organizations for which NSF has cognizance, negotiated indirect cost rates can vary because of the type of work being funded by awards and the ways in which different organizations account for their costs. For example, salaries for administrative or clerical staff may be included as either an indirect or direct cost, as long as they are consistently treated across an organization's awards. Our preliminary analysis of the rate agreement case files for nine organizations in a nongeneralizable sample of files we reviewed showed the rates ranged from 5.5 percent to 59.8

percent. An organization may choose to budget indirect costs for an award at a level close to its negotiated indirect cost rate for the organization, or it may choose to budget the costs differently. For example, one of the organizations in our sample had a negotiated indirect cost rate of 51 percent in fiscal year 2016.[14] In that year, the organization received one NSF award for $535,277 that budgeted $180,772 for indirect costs (or about 34 percent of the award)—a calculated indirect cost rate on the award of about 51 percent.[15] Another organization in our sample had a negotiated indirect cost rate of 5.5 percent in 2016, and one of its NSF awards in fiscal year 2016, for $1,541,633, did not budget for any indirect costs.

We based our preliminary analyses of indirect costs on data from the budgets of NSF awards—the only available NSF data on indirect costs. According to NSF officials, prospective awardees are required to provide direct and indirect costs in their proposed budgets using the organization's negotiated indirect cost rate. After an award is made, NSF does not require awardees to report information about indirect costs when requesting reimbursements for work done on their awards for projects. Specifically, NSF's Award Cash Management $ervice—NSF's online approach to award payments and post-award financial processes—does not collect data about indirect costs, although NSF is permitted to do so by OMB guidance.[16] According to NSF officials, doing so would unnecessarily increase the reporting burden on awardees.

NSF Guidance for Setting Indirect Cost Rates Has Not Been Consistently Implemented and Does Not Include Certain Details

Our preliminary review of NSF's guidance for setting indirect cost rates and a nongeneralizable sample of nine indirect cost rate files indicates that NSF has issued internal guidance that includes procedures for staff to conduct timely and uniform reviews of indirect cost rate proposals, collect data, set rates, and issue letters to formalize indirect cost rate agreements. However, we also found that NSF staff did not consistently apply the guidance. The guidance

[14]That is, for every $100 in modified total direct costs on an award (i.e., total direct costs minus exclusions, such as equipment and capital expenditures), the organization can seek reimbursement for an additional $51 for indirect costs.

[15]The calculated indirect cost rate for the award was the budgeted indirect costs divided by the budgeted direct costs; in this case, $180,772 divided by $354,455 for a calculated indirect cost rate on the award of 50.99 percent.

[16]NSF's Award Cash Management $ervice implements the OMB-approved form for awardees to report financial data on their federal awards. The OMB-approved data elements for indirect expenses that federal agencies may collect include (1) type of rate (i.e., provisional, predetermined, final, fixed), (2) indirect cost rate in effect during the reporting period, (3) the base against which the rate was applied, (4) total amount of indirect costs charged during the reporting period, and (5) the federal share of the total amount of indirect costs.

also includes tools and templates for staff to use to consistently set rates and procedures for updating the agency's tracking system for indirect cost rate proposals. However, in our preliminary analysis of NSF guidance, we found that (1) NSF staff did not consistently follow guidance for updating the tracking system, (2) the guidance did not include specific procedures for how supervisors are to document their review of staff workpapers, and (3) NSF had not updated the guidance to include procedures for implementing new provisions issued under the Uniform Guidance.[17]

In 2008, NSF created a database to track indirect cost rate proposals and developed guidance for updating the tracking database with proposal information. However, our preliminary analysis of reports from the tracking database indicates that NSF staff have not consistently followed the guidance for updating the tracking database with current data about the awardees for which NSF has cognizance and the status of indirect cost rate proposals. For example, in our preliminary analysis, we identified eight awardees for which NSF was no longer the cognizant agency but that still appeared in the tracking database on a list of agencies from which proposals were overdue. Cognizance for these awardees had been transferred to other agencies from 2009 through 2014. In addition, we identified 46 instances in which NSF staff had not followed the guidance to update the tracking database to reflect the current status of awardees' proposals, including instances in which the tracking database was missing either the received date or both the received and closed dates.

In addition, while NSF's guidance describes procedures that staff are to follow for setting indirect cost rates, it only includes broad procedures for supervisory review—NSF's primary quality control process for setting indirect cost rates. The guidance does not describe specific steps that supervisors need to take when reviewing the work performed by staff when setting indirect cost rates, nor does it include how supervisors should annotate the results of their reviews in the workpapers. In our preliminary review of a nongeneralizable sample of nine NSF rate files, we did not find any documentation that a supervisor had reviewed the work performed by staff, such as verifying that staff had checked the accuracy of the total amount of awards over which an awardee's indirect costs were distributed. Such reviews are meant to provide reasonable assurance that only allowable, allocable, and reasonable indirect costs have been proposed and that such costs have been appropriately allocated to federally funded awards.

[17]National Science Foundation, *Standing Operating Guidance 2013-3: Indirect Cost Rate Proposal Review* (Arlington, Va.: May 13, 2013).

Moreover, our preliminary observations on NSF's guidance indicates that it does not include procedures for implementing certain aspects of OMB's Uniform Guidance, which became effective for grants awarded on or after December 26, 2014. For example, a new provision under the Uniform Guidance allows research organizations that currently have a negotiated indirect cost rate to apply for a onetime extension of that rate for a period of up to 4 years; however, NSF guidance does not specify criteria for NSF staff to determine the circumstances under which an awardee could be given an extension.

In closing, I would note that we are continuing our ongoing work to examine NSF's data on indirect costs for its awards over time and its implementation of its guidance for setting indirect cost rates for organizations over which it has cognizance. NSF awards billions of dollars to organizations each year and, given the constrained budget environment, it is essential that NSF ensures efficient and effective use of federal science funding. We look forward to continuing our work to determine whether NSF actions may be warranted to promote this objective. We plan to issue a report in fall 2017.

Chairwoman Comstock, Chairman LaHood, Ranking Members Lipinski and Beyer, and Members of the Subcommittees, this completes my prepared statement. I would be pleased to respond to any questions that you may have at this time.

GAO Contact and Staff Acknowledgments

If you or your staff members have any questions concerning this testimony, please contact me at (202) 512-3841 or neumannj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Other individuals who made key contributions to this testimony include Joseph Cook, Assistant Director; Kim McGatlin, Assistant Director; Rathi Bose; Ellen Fried; Ruben Gzirian; Terrance Horner, Jr.; David Messman; Lillian Slodkowski; Kathryn Smith; and Sara Sullivan.

(101989)

Biography

John Neumann is a Director in GAO's Natural Resources and Environment Team, with over 25 years of experience leading performance audits of federal programs. He currently leads efforts in the science and technology area, including the management and oversight of federal research and development programs, protection of intellectual property, and federal efforts to support innovation. Mr. Neumann received his B.A. in Political Science cum laude from the State University of New York at Stony Brook, and holds an M.B.A from American University, as well as a J.D. from Georgetown University.

Chairwoman COMSTOCK. Thank you.
And I now recognize Mr. Luther for five minutes.

TESTIMONY OF MR. JAMES LUTHER, ASSOCIATE VICE PRESIDENT OF FINANCE & COMPLIANCE OFFICER, DUKE UNIVERSITY; CHAIRMAN OF THE BOARD, COUNCIL ON GOVERNMENTAL RELATIONS

Mr. LUTHER. Good morning, Subcommittee Chairwoman Comstock, Ranking Member Lipinski, Subcommittee Chairman LaHood, Ranking Member Beyer, and members of the Research and Technology and Oversight Committees. My name is Jim Luther. The perspective I represent today is both as a compliance officer and finance individual at Duke University as well as the Board Chair for the Council of Government Relations, which is a group of about 190 of the nation's major research universities, medical centers and research institutes.

I'll start by expressing my appreciation for this opportunity to discuss the federal university research partnership and how universities are reimbursed for the cost of conducting federally funded research. Academic institutions have been working in partnership with the federal government for decades to advance national security, health and prosperity. This partnership allows for significant cost efficiency in the use of federal funds where the government is unbound from maintaining its own facilities and personnel, and it has yielded tremendous results.

United States leads the world in scientific innovation, which has led to significant economic benefits, job growth, and advances in healthcare and defense that benefit all Americans.

The federal government contributes over 50 percent of funding for academic research. These funds include direct costs of personnel, supplies and equipment as well as facilities and administrative costs that represent critical infrastructure that supports the research. F&A costs cannot be viewed separately from direct costs. Together they represent the total cost of performing research.

If direct costs are thought of as the gas for the research engine, F&A reimbursements represent the oil. The research engine requires both.

My remaining comments are summarized in four points. Number one, there is a longstanding, time-tested commitment to the partnership. Number two, the effectiveness of the partnership is demonstrated by the cures that have impacted human health, improvements in defense, infrastructure, engineering, biology, social science, and other areas. Number three, the current system recognizes cost and infrastructure differences. Some research is more expensive than others because of geography but, more important, the type of research. And finally and most importantly, the current system recognizes that F&A is a real cost of doing research.

Research institutions provide the physical infrastructure where research is conducted. This includes construction and maintenance of specialized facilities and labs, which support diverse research such as the study of serious and potentially lethal agents, advanced robotics, and critical vaccines. F&A costs also provide key oper-

ations infrastructure such as utilities, high-speed data processing, human and animal research review boards, radiation and chemical safety, and other compliance activities required when accepting federal funds. It is as basic as turning on the lights and as complex as supporting the disposal of biohazardous materials like anthrax.

F&A costs are tightly regulated and audited by the government to ensure that the government only funds that portion of F&A costs that are attributable to the federally funded research. F&A costs on federal awards have remained relatively constant for the past two decades. At NIH, approximately 28 percent of all expenditures are attributable to F&A.

Universities are committed partners in our nation's research enterprise, committing more than 24 percent of their own funds towards higher education research and development—$17.7 billion in fiscal year 2015.

It is important to note that federal funding does not fully cover F&A costs apportioned to federal studies. That is due in part to a cap on administrative costs put in place for research universities in 1991 but also due to the significant increase in federal requirements that necessitate additional infrastructure and staff. A recent National Academies report noted that the federal government promulgated on average 5.8 new or changed regulations and policies per year over the past decade, a 400 percent increase over the 1990s. As nearly all universities are over the administrative cap of 26 percent, all new costs associated with complying with these regulations are borne by the university. That represents about $4.8 billion related to unreimbursed F&A costs.

With respect to research space, Duke's experience is that a moderate-sized research building increases our institutional cost by approximately $10 million per year, even after the recovery of F&A. This is due to faculty start-up costs, ongoing faculty and research support, subsidized animal operations, and components of the building which are not designated as research.

In closing, I would emphasize three points. The longstanding commitment to the partnership works, and it's been time-tested for many decades but is being jeopardized by declines in state funding, increasing regulations, and reduced F&A reimbursements. Number two, the current system recognizes costs and infrastructure differences that some research is more expensive, and for good reason. Different geographic regions and types of research can cause significant differences in costs. The costs related to support policy research is vastly different than F&A costs related to biocontainment, translational cell therapy, and so forth. And finally and most importantly, it recognizes that F&A cost is a real cost and doing research without it, plain and simple, we could not turn on the lights.

I would suggest that the effectiveness of this hearing would be reduced if we were sitting on the Capitol steps and didn't have lights, didn't have air conditioning, chairs, legislative aides, and AV equipment. That is analogous to the F&A support needed for university research.

Any reduction in federal funding including funding for research infrastructure will result in less research, slower scientific progress, fewer medical treatments, fewer jobs, and likely fewer

universities conducting research, and undergraduates and graduate students educated in the research setting.

Thank you.

[The prepared statement of Mr. Luther follows:]

Congress of the United States
House of Representatives

Committee on Science, Space, and Technology
Subcommittee on Research and Technology
The Honorable Barbara Comstock, Chairwoman
Subcommittee on Oversight
The Honorable Darin LaHood, Chairman

Written Testimony
Mr. James D. Luther
Associate Vice President of Finance
Duke University

Examining the Overhead Cost of Research

May 24, 2017

Good Morning Subcommittee Chairwoman Comstock, Ranking Member Lipinski, Subcommittee Chairman LaHood, Ranking Member Beyer and members of the Research and Technology and Oversight Subcommittees. My name is Jim Luther. I am the Associate Vice President for Finance and Research Costing Compliance Officer at Duke University. I also serve as the Board Chair for the Council on Governmental Relations, an association of 190 of the Nation's major research universities, medical centers and research institutes. I would like to start by expressing my appreciation for this opportunity to discuss the federal-university research partnership and how universities are reimbursed for the costs of conducting federally funded research.

Federal-University Partnership

Academic institutions have been working in partnership with the Federal Government for decades to advance national security, health and prosperity, beginning in 1945 when Vannevar Bush, then Director of the White House Office of Scientific Research and Development published his seminal work, *Science, the Endless Frontier: A Report to the President on a Program for Postwar Scientific Research*. Bush's report argued that universities, as the engines of discovery, were essential to advancing the national agenda; in the *Endless Frontier*, Bush stated: "It is only colleges, universities, and a few research institutions that devote most of their research efforts to expanding the frontiers of knowledge." This partnership -- which has allowed for significant cost efficiencies where the government is unbound from maintaining its own facilities and personnel -- has yielded tremendous results. The United States leads the world in scientific innovation, which has led to significant economic benefits and job growth, advances in human health and defense, and an improved quality of life for all Americans. This investment in university-based research serves the dual function of:

- Generating ground-breaking discoveries that are the foundation for technological and medical breakthroughs; and,
- Training the next generation of scientist, engineers, and entrepreneurs.

The value of this young and readily available "research labor force" cannot be underestimated. Universities recruit, educate and professionally prepare the next generation of researchers, solidifying the United States' position as a world leader in research for generations to come.

Federal Funding and Reimbursement of Research Costs

The Federal Government contributes over fifty percent of funding for academic research. These funds include the "direct costs" of personnel, supplies, and equipment, as well as the facilities and administrative (F&A) costs that represent critical research infrastructure. F&A costs cannot be viewed separately from direct costs; together they represent the total cost of performing research. If direct costs are thought of as "gas" for the research engine, F&A reimbursements represent "oil" – the research engine requires both.

Research institutions provide the physical infrastructure where research is conducted (i.e. facilities – the "F" in F&A). This includes construction and maintenance of specialized facilities and laboratories which support diverse research, such as the study of serious and potentially lethal agents, advanced robotics, and critical vaccines. F&A costs also provide key operations infrastructure such as utilities, high-speed data processing, libraries, depreciation, radiation and chemical safety, and other facility related activities.

The administrative (i.e. the "A" in F&A) component includes those costs related to administrative and compliance activities required to conduct federally sponsored research, including human and animal research review boards, financial reporting and purchasing, training and education, managing potential conflicts of interest, financial management, including accountability for research time charged to federal

awards, and the personnel and related costs to comply with other federal, state, and local requirements. It is as basic as turning on the lights and as complex as supporting the disposal of biohazardous materials like anthrax. With federally supported research, the institution takes on the responsibility and risk, and provides both the facilities and compliance support necessary for the investigator to conduct research.

How is F&A Determined and What are the Safeguards?

F&A costs are tightly regulated and audited by the government to ensure that the government funds only that portion of F&A costs, including the costs of research space, that are attributable to the performance of federally funded research. Federal regulations prescribe the methodology for developing the F&A proposal reviewed by federal agencies. These regulations define the "cost buckets" and allocation methodologies for every item on an institution's general ledger. Further, each negotiating team from Health and Human Services or the Office of Naval Research (the two cognizant government agencies responsible for determining university F&A rates) have detailed guidance documentation that drive a consistent oversite, review and negotiation process.

F&A rates are established for each institution in accordance with federal requirements mandated by the Office of Management and Budget. It is expected that rates will vary by region and institution. These variances occur for two major reasons:

1. Construction, renovation, utility costs and wages/cost of living vary significantly by region; and perhaps more importantly,
2. F&A rates vary depending upon the types of research that are conducted at an institution and the facilities necessary to conduct the research. Certain types of research are much more F&A intensive than others. For example, an institution that primarily does social science or observational research is likely to have a lower F&A rate than a biomedical research institution engaged in cutting-edge genomic research.

Institutions with higher than average F&A rates typically support facility intensive types of research that may include:

- Biocontainment laboratories that support immunology, virology, and microbiology research involving dangerous biological pathogens and select agents;
- Cord blood bank and stem cell transplant facilities;
- Animal facilities, which are also heavily subsidized by universities;
- Utility intensive technology buildings that require specialized HVAC systems, cold rooms, warm rooms, and air & water filtering systems;
- IT intensive imaging requirements that utilize petrabytes of information;
    - These costs are increasing logarithmically given that big data science is now becoming the norm for all labs.
- Translational Cell Therapy facilities that supports cell and tissue-based therapeutic products research which are built to FDA specifications; and,
- Resources to support genomic, proteomic, and metabolomics analysis and sequencing.

Some have suggested that universities build advanced laboratories unnecessarily, deriding them as "fancy"; this characterization is wrong. These are state of the art facilities necessary to conduct cutting edge research and do so in a safe and responsible manner. We as a nation cannot afford to conduct research with dangerous pathogens, for example, in facilities that do not meet necessary standards for safety. Where advanced facilities are not needed we often make do with dated research space and I would invite members of these subcommittees to tour the Duke campus to see both our advanced, cutting-edge

facilities as well as the substantial research space for which the university has deferred renovations. Further, with respect to proposals for flat rates, a flat rate could not adequately reimburse research-intensive universities that provide the necessary labs and facilities for the types of biomedical and facility intensive research described above.

Once F&A rates have been officially approved by the appropriate federal agency, it is incumbent on the university to accurately apply these costs. Duke University has dedicated offices charged with reviewing and applying F&A rates. Duke also requires specific training in the budgeting and expenditure processes, and regularly monitors F&A charges to ensure compliance. Costs charged to federal agencies are then audited annually by independent audit firms hired by the institution to comply with federal requirements and subject to additional federal agency and inspector general audits.

F&A Rates and Foundations

Comparisons have been drawn between F&A rates allowed on awards from non-federal sources, primarily foundations, and the federal government. Private foundations and charitable organizations, which contribute about 6% of all academic research funding, a relatively small contribution when compared with the role of the Federal Government and academic institutions, often do place limitations on F&A reimbursement. Research institutions accept these awards when such sponsors support mutual research and service aims for which funding opportunities are limited or that may be aimed at solving issues at the state and local level, for example, improving corn production or providing services to solve local problems. This support is provided in a very strategic and focused manner that develops synergies between a foundation and a university that has the infrastructure to support the research, and eventually the entrepreneur and business that will leverage the outcomes. Likewise, foundation funding can be used to augment federal funding. The Gates Foundation, for example, has enabled and provided funding for AIDS vaccine research at Duke when National Institute for Allergy and Infectious Diseases funding has waned; a synergistic partnership that WILL lead to an AIDS vaccine.

With respect to reimbursement, F&A rates charged to non-federal sponsors, such as foundations, are not expected to comply with federal accounting rules and therefore rates are often charged to the entire contract amount versus the lesser "modified" amount used for federal awards, which excludes certain costs. Foundations also often categorize and pay grant-related expenses very differently than the federal government does. For example, foundations often categorize some items as direct expenses that federal rules require to be counted as F&A expenses. And most universities would not accept an award that requires significant infrastructure unless foundations agreed to pay those costs directly.

It is worth noting that a number of federal programs, such as NIH career and training awards, also place limitations on F&A reimbursement (restricted to 8%) with the rationale that these programs are less F&A intensive than others, and the total dollar amount of these grants is far more than total foundation funding. Most federal awards, however, are F&A intensive and even full reimbursement at the negotiated rate does not cover the costs. Further, universities are typically not reimbursed at this rate. A November 2014 article in Nature on F&A costs found that "the data support administrators' assertions that their actual recovery of indirect costs often falls well below their negotiated rates." Overall, the average negotiated rate is 53%, and the average reimbursed rate is 28%. Research universities are never fully reimbursed for their F&A outlays; in sharp contrast to private industry that is not subject to the same limitations and can include a profit factor. In fact, colleges and universities are the only entities not fully reimbursed for the administrative costs of conducting federal research.

Universities Contributions to Federally Funded Academic Research

F&A costs on Federal awards have remained relatively constant for the past two decades. At NIH for example, approximately 28% of all expenditures are attributable to F&A costs. This stability has been maintained, despite ever-increasing federal regulations and reporting requirements.

Universities are committed partners in our Nation's research enterprise, committing more than 24% of their own funds towards higher education research & development activities–$16.7 billion in FY15 according to federal data. This commitment and partnership is being challenged, however, by a number of factors, among them declining state and federal funding and increasing regulations.

Federal funding doesn't fully cover F&A costs apportioned to federal studies. This is due, in part, to a cap on administrative costs put in place for research universities in 1991, but also to a significant increase in federal requirements that have and will necessitate additional infrastructure and staff. The National Academies report, *Optimizing the Nation's Investment in Academic Research*, noted that in the 1990s the federal government promulgated approximately 1.5 new or substantially changed federal research regulations and policies per year while in the last decade that number increased to 5.8 per year. Between January 2016 and 2017, at least nine new or substantially changed federal regulations and requirements were promulgated. The topic of increasing regulatory burden was the focus of my testimony to this Committee eight months ago along with the Government Accountability Office, the National Academies, and George Mason University. All stakeholders agreed with the key conclusions of the National Academies report, the National Science Board report *Reducing Investigators' Administrative Workload for Federally Funded Research* and the Federal Demonstration Partnership *Faculty Workload Surveys* and that;

- the regulation of research continues to steadily increase;
- there is a lack of standardization across agencies; and,
- federally funded research could be regulated much more efficiently.

Costly new requirements which are not yet implemented, such as data sharing, data protection, and data storage, and a new requirement to use a single institutional review board for multisite research stand to further increase total unreimbursed costs. As nearly all universities are over the administrative cap, all new costs associated with complying with these regulations are borne by the university. While F&A costs incurred by universities have increased, the rate of reimbursement for those costs generally has not. Of the $16.7 billion in university contributions to academic research in FY15, $4.8 billion was attributable to unreimbursed F&A costs and over $1.3 billion to cost sharing.

F&A costs are the real cost of doing research. Without these critical infrastructure costs, research universities and research institutions could not be viable partners in the nation's research enterprise. I conclude with a simple example from Duke. However, this could be true at Harvard, or the University of Illinois, or at George Mason University. With respect to research space, when the Duke School of Medicine contemplated a new mid-size building several years ago, the foundation of our analysis was the impact on the science conducted at our institution. As we proceeded to financial analysis we determined the new facility would increase Duke's institutional costs by approximately $10 million per year even after accounting for F&A recovery. This is due to faculty start-up costs (the cost of an average lab start-up over 3 years is approximately $1.5 to $2 million of institutional funding), on-going faculty research support staff, subsidized animal operations and components of the building which are not designated as research. In short, the decision to construct new buildings is entirely focused on the criticality of the science and the ability to meet ever-changing technology and laboratory needs and not the fact that the federal government may reimburse a portion of the building costs, as new construction will always represent a net loss to the institution.

Summary

The Nation's research institutions are active partners in research, providing the facilities, equipment and research personnel necessary to perform federally funded research. We fund one quarter of academic research, with the Federal government funding over half, in a partnership that has made the U.S. scientific enterprise the envy of the world and this country the global leader in science and innovation. Declines in state funding for public universities, increasing regulations and reporting requirements, and federal F&A reimbursements that do not fully cover costs jeopardize this partnership. Any reduction in federal funding, including funding for research infrastructure, will result in less research, slower scientific progress, fewer medical treatments, fewer jobs, and likely fewer universities conducting research and undergraduates and graduate students educated in a research setting. Stable and consistent funding of the entire spectrum of research infrastructure and activities is necessary to maintain our standing. We need to remain at the forefront of innovation and continue to fully support our nation's research enterprise.

Bio – James D. Luther
Duke University
(May 2017)

Jim Luther is the Associate VP Finance and Research Costing Compliance Officer. Jim's responsibilities include post-award areas and asset management oversight for the University and School of Medicine, negotiation of Duke's indirect cost and fringe benefit rates, and all aspects of Duke's research costing compliance program. He came to Duke in 1990 and has served in many capacities. Over the past several years he has instituted a compliance program that includes mandatory training for faculty and administrators, a comprehensive compliance certification program, and a compliance monitoring program.

He is active nationally and is currently the Chair of the Board of the Council on Governmental Relations (COGR) in Washington DC and the co-chair of the Finance Policy Workgroup with federal representatives for the Federal Demonstration Partnership (sponsored by the National Academies of Science). Before joining Duke, Luther served as a Captain in the U.S. Marine Corps. Luther earned his B.S. in Engineering from the United States Naval Academy and an M.A. from Duke University.

Chairwoman COMSTOCK. Thank you.
I recognize Dr. Vedder for five minutes.

TESTIMONY OF DR. RICHARD VEDDER,
DISTINGUISHED PROFESSOR OF ECONOMICS EMERITUS,
OHIO UNIVERSITY,
DEPARTMENT OF ECONOMICS;
DIRECTOR, CENTER FOR COLLEGE
AFFORDABILITY AND PRODUCTIVITY

Dr. VEDDER. Chairs Comstock and LaHood, Dr. Lipinski, Mr. Beyer, Members of the Committee, the policy of the federal government regarding overhead or indirect cost reimbursement to universities holding research grants is seriously flawed.

Two highly regarded economists from Stanford and Northwestern Universities concluded talking about overhead costs, and I quote them, "The existing system for reimbursing those costs creates unnecessary distortions in the operations of universities and has very high transactions cost. Instead, both universities and the federal government would be better off if the existing indirect cost reimbursement system were replaced by a system of fixed reimbursement rates that were not related to a university's actual indirect costs."

Suppose the NIH or NSF makes a million-dollar grant to a Harvard researcher. The immediate increase in indirect costs to Harvard for buildings, administration, electricity and the like as a consequence of that grant is probably at most a few thousand dollars. But however, Harvard will get several hundred thousand dollars in overhead funds, therefore, making a large short-term financial gain. At many schools including my own, researchers getting federal grants receive a kickback of some of the overhead money as an incentive to seek more grants. Schools would do not that unless they considered federal research grants to be at least somewhat financially lucrative.

Now, to be sure, in the long run there are real legitimate long-term indirect costs yet I think the current system incentivizes universities to pad their bureaucracies and have excessively fancy buildings. As one academic put it, "The more you spend, the more you get." Where's the incentive to have linoleum floors instead of marble?

A fairly considerable amount of resources is also devoted to justifying and verifying overhead costs. Non-governmental organizations making grants to universities typically allow far lower amounts of indirect costs. What are the policies regarding state government financial research? Again, today's GAO testimony suggests that the overhead provision is smaller. I calculate from figure 2 of the GAO report today that the average NSA university overhead provision in 2016 was about 37 percent of the amount granted for direct research costs, 27 percent of the total, 37 percent for research.

There are two good approaches to replacing the current system. The first would be to adopt a uniform national reimbursement rate. This was unsuccessfully proposed in the Obama Administration. This approach could save resources by ending negotiations and

verifications and audits surrounding unique individual rates on various campuses. If a university—if a uniform federal rate of, say, 20 percent were adopted, you would be able to maintain the amount of money going directly for research within a ten percent NSF funding reduction if that were to happen. I'm not advocating that, by the way, but I said you would be able to do so.

Although over time—and I would predict universities would still vigorously apply for grants although over time they would reduce their bureaucracies, hold fewer grant-writing workshops and like—more bang for the buck.

Under a second approach, the decision as to who would receive research grants would be partly determined by project price—a novel notion. Suppose NSF or NIH grants are made on a point system, 100 points being the maximum? Have 75 points be determined as now by the scientific merit of the proposal. Have the remaining 25 points be determined by the amount of overhead universities request. With the more points gained, the lower the overhead request. A school asking for 50 percent overhead for a grant might only get one point on the indirect cost portion of the grant application while one asking for only 20 percent might get 22 points. Greedy universities—a concept some don't believe exist but I've been at them for 52 years, and I know. Greedy universities with extraordinary indirect cost requests would likely get fewer grants while frugal universities willing to accept modest overhead provision would gain some advantage.

It is possible to get more actual research activity per dollar of total funding by paring our support for indirect cost provisions in funded grants.

Thank you, Madam Chairman.

[The prepared statement of Mr. Vedder follows:]

TESTIMONY OF RICHARD K. VEDDER
BEFORE THE SUBCOMMITTEE ON RESEARCH AND TECHNOLOGY AND THE SUBCOMMITTEE ON OVERSIGHT,
COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES
MAY 24, 2017

Chairs Comstock and LaHood, Dr. Lipinski, Mr. Beyer, and Members of the Committee:

I am the Director of the Center for College Affordability and Productivity, and Distinguished Professor Emeritus of Economics at Ohio University.

The policy of the federal government regarding overhead or indirect cost reimbursement to universities holding research grants is seriously flawed, and potentially reduces the amount of conducted scientific research while burdening American taxpayers. Not a lot has been written about this by academic scholars who are usually not hesitant about exposing public policy deficiencies, probably largely because many of them have an enormous conflict of interest, as they themselves are recipients of federal research funds. I have not had federal research money for at least 20 years and do not expect to ever do so again, thus I am free of those conflicts.

I should say, however, that I am not alone among academics in condemning current policy. Two highly regarded economists, from Stanford and Northwestern Universities, Roger Noll and William Rogerson, writing in 1998 concluded, talking about overhead costs: "the existing system for reimbursing those costs creates unnecessary distortions in the operations of universities and has very high transactions costs. Instead, both universities and the federal government would be better off if the existing indirect cost reimbursement system were replaced by a system of fixed reimbursement rates that were not related to a university's actual indirect costs."

The reimbursement system has not changed; each university has a negotiated overhead rate, with the most prestigious, wealthiest schools typically getting much more than lowly endowed state schools with lesser resources. For example, I have read that the reimbursement rate at Harvard is about 69 percent, but at my fairly typical mid-quality state university it is only about 50 percent. To be sure, actual reimbursement for overhead is typically a good deal less than the official institutional overhead rate because of various items excluded from the base used to determine overhead amounts. Somewhat surprisingly, university overhead rates are not routinely on websites of organizations like NIH and NSF, and access to that information in the past has been restricted to the general public on the grounds that it is proprietary, an absolutely outrageous practice that should be outlawed if the current system of variable indirect cost reimbursement rates continues, which I hope it does not.

Suppose the NIH or NSF makes a new $1 million grant to a Harvard researcher. The immediate increase in indirect costs to Harvard for buildings, administration, electricity and the

like as a consequence of that grant is probably at most a few thousand dollars; for example a bit more electricity and water may be used. However, Harvard will get several hundred thousand dollars in overhead funds. In the short run, the depreciation of building facilities tends to be ignored, and the administrative burden of having one more grant is small enough that no new staff must be added. Therefore, Harvard makes a large short-term financial gain, and thus it likely incentivizes its faculty to seek more grants. Getting a grant typically helps faculty members seeking promotion or larger salaries. It is revealing that at many schools, including my own, researchers getting federal grants directly receive a kick back of some of the overhead money for non-salary uses as an incentive to seek more grants. Schools likely would not do that unless they considered federal research grants to be at least somewhat financially lucrative.

To be sure, in the long run, the buildings and equipment where research takes place need to be replaced and there are administrators who have tasks to perform regarding sponsored research activities. In short, there are real, legitimate long run indirect costs. Yet the current system seems to incentivize universities to pad their bureaucracies, and to have excessively fancy buildings. As Boston area academic Wick Sloane put it in a *Boston Globe* story on this topic in 2013, "the more you spend, the more you get. Where's the incentive to have linoleum floors instead of marble?" My own discussions with grant-receiving researchers find in general they believe overhead amounts are excessive. Among other things, overhead money funds bureaucrats whose job it is to promote strategies for winning grants, money better used from a broader social perspective for actual research. A fairly considerable amount of resources is devoted to justifying and verifying overhead costs –a cost with no direct impact on the quality or quantity of academic research.

Anecdotal evidence suggests that non-governmental foundations and other charitable organizations making grants to universities typically allow far lower amounts for indirect costs. What is the typical overhead reimbursement amounts for, say, the Rockefeller, Ford, Gates, or Lumina foundations? For grants I have received from private donors, it is vastly lower than the 40 percent or so typical of federal research grants. What are the policies regarding state government funded research? Again, anecdotal evidence suggests the overhead provision is smaller. What little information I have gathered hints that overhead reimbursement is lower in neighboring Canada. Why? Perhaps you should ask the Government Accountability Office to look at the reimbursement rates used by non-governmental grantors and by also by governments such as Canada, the United Kingdom, and the American states.

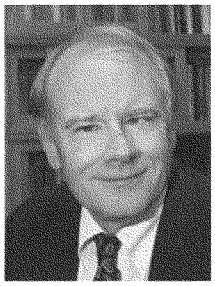
What should we do? The current system of negotiated rates is administratively expensive, supports excessive bureaucracies, and is arguably unfair, favoring wealthy schools over other institutions. There are two approaches to replacing the current system, either one of which would represent a great improvement, freeing up more research dollars for actual research rather than funding administrators, and promoting the use of serviceable linoleum floors over extravagant marble ones.

The first approach would be adopt a uniform national reimbursement rate. This was proposed in the Obama Administration but was shot down by relentless lobbying by top research universities. This approach could save a good deal of money by ending the negotiations and verifications surrounding the unique individual rates on various campuses. I would predict that if a uniform federal rate of say 30 percent were adopted, you would be able to increase the amount of money going directly for research, that universities would complain bitterly but still apply for grants nearly as vigorously as ever, that over time they would pare down a bit their bureaucracies, hold fewer grant writing workshops and the like, but that life would go on much as before, with a bit more research being performed. In short, there would be more bang for the buck.

There is an alternative approach that is in some ways even more appealing, although there are some disadvantages as well. Under this approach, the decision as to who would receive research grants would be partly determined by the price of it –a radical idea perhaps to researchers but not anywhere else in society. Suppose NSF or NIH grants are made on a point system, with 100 being a maximum. Have 75 points be determined, as now, by the scientific merit of the proposal using current procedures. Have the remaining 25 points be determined by the amount of overhead the university requests, with the more points gained the *lower* the overhead request. Universities demanding huge overhead amounts would risk losing grants on the basis of cost. A school asking for 60 percent overhead for a grant might get only 1 point on the indirect cost portion of the score for the grant application, while one asking only 30 percent might get 22 points. Greedy universities with extravagant indirect cost requests would likely get fewer grants, while frugal universities willing to accept modest overhead provision would gain some advantage. The notion that indirect costs should *not* have a bearing in determining the success of a proposal is inconsistent our scarcity of resources. The Law of Demand should apply here as it does virtually everywhere else in life.

We are in a slow growth economy with huge unfunded liabilities arising from our system of entitlements, especially Social Security and medical care expenses. Resources are scarce. Irresponsible past fiscal behavior imperils future generations, so we have a moral as well as a financial obligation to seek to minimize outlays for any given provision of public service. Consistent with that objective, it is possible to get more actual research activity per dollar of total funding by paring our support for indirect cost provisions in funded grants.

Thank you.



Dr. Richard Vedder

Dr. Richard Vedder is Distinguished Professor of Economics emeritus at Ohio University in Athens, Ohio. He has written extensively on labor issues, authoring such books as *The American Economy in Historical Perspective* and, with Lowell Gallaway, *Out of Work: Unemployment and Government in Twentieth-Century America*. Vedder is also an expert on the economics of higher education.

Vedder has written over 100 scholarly papers published in academic journals and books, and his work has also appeared in numerous newspapers and magazines including the *Wall Street Journal*, *Washington Post*, *Investor's Business Daily*, *Christian Science Monitor*, and *USA Today*.

Vedder has been an economist with the Joint Economic Committee of Congress, a fellow of the George W. Bush Institute, and an adjunct scholar at the American Enterprise. He directs the Center for College Affordability and Productivity and served on Secretary Margaret Spelling's "Commission on the Future of Higher Education."

Vedder received his PhD in economics from the University of Illinois.

Chairwoman COMSTOCK. And I now recognize myself for five minutes for questions.

Given the wide range that we have there, could you explain to us, like for example, Harvard University has—what, they're up in the 60s or so for their rate of—is that correct? And so—and Harvard University probably has one of the largest endorsements in the country. Would that be correct? You all agree? Okay.

So what I'm looking at some place like George Mason—and I understand a lot of the universities don't want to have caps here. What I'm trying to look at is how when we have a university with a huge endorsement, probably one of the largest in the country, has one of the highest rates, how can we, you know, provide for fairness, particularly for the new and up-and-coming universities? Do we want to have more diversity in terms of ability to get the research out there? I think, Dr. Vedder, you provided some different ideas on that.

And then also, and this is sort of for all of you to address maybe in a general idea, but when you look at—I'm thinking at George Mason, I know the Gates Foundation is funding some of the research that we have going on, I believe in Lyme disease. The state also funds it. I'm not sure what their rate is that they allow, and then we have some federal government money going in there. How does that work when the Gates Foundation does cap their administrative costs at ten percent. How does this all work out when you have those different rates, and how can we as the federal government maybe get a better bang for the buck and getting the money going directly to research among the different situations and different universities?

Mr. LUTHER. Could I respond to that question?

Chairwoman COMSTOCK. Yes, Mr. Luther.

Mr. LUTHER. Thank you. So I think there were three questions, one about the endowment, one about why do rates vary, and one about foundations. So the endowment piece, I'm not an expert on endowment, but there's certain restrictions about how you can use the funds for endowment.

But if I could address the other two because I think they're kind of at the heart of the issue as we look at this, and I would suggest that rates vary significantly as we all have discussed for two primary reasons. One, because of geography, what region they're in. If you have the exact same research building in San Francisco or New York City or in the middle of America, that exact same research, the cost of that, the cost of construction, utilities and everything else are going to be vastly different.

But the second point I think is more important there, and that is, it's all about the type of research. Within Duke, if we looked at individual grants, we have research being done on public policy, and the F&A related to that individual grant is a computer, the lights and so forth. If we look at a school of medicine, they have biocontainment facilities, they have specialized HVAC, they have warm rooms and cool rooms, they have purified water, they have the ability to filter the water for the experiments in a certain way. They have IT infrastructure. I mean, it truly is all about the research, the type of research being done, and I would suggest—again, within Duke, we might see one grant where the effective

rate is low, we might see another grant where it's really 100 percent or more. That averages out across the institution in this process.

And then with regard to foundations, I think there's a couple of things to look at. We have a fair amount of foundation money. A fair amount of that is from the Gates Foundation. But the way we cost is vastly different from a foundation to the federal government. First of all, foundations—and it's on the Gates Foundation website, for example—they will routinely pay certain things that the federal government will not pay. They pay it directly—project management costs, facilities costs, lots of different things that the federal government would not pay.

The second thing is that foundations generally apply their F&A rate to total direct costs. There was some discussion before about modified total direct costs. The federal government does not pay overhead to Duke University on capital equipment, patient care, sub awards, lots of different categories. Oftentimes a foundation does.

And then continuing, many of the foundation funding relates to off-campus work so comparing the Gates Foundation to Harvard at 60, it's more appropriate to compare to the off-campus rate, which is normally around 25, 26, 27 percent.

And then lastly, I would say, you know, foundations, at least our experience at Duke, are oftentimes incremental funding. We have again a fair amount of Gates Foundation funding that is providing funding related to development of an AIDS vaccine. NIAID is providing the bulk of that funding. The Gates Foundation is providing critical funding to support that.

Chairwoman COMSTOCK. Dr. Vedder, did you want to——

Dr. VEDDER. As Mr. Luther mentioned, there were several components to your question. One point you made with regards to endorsements, and it is—I think you're raising a fairly legitimate question, and also about the overall issue of sort of inequality in the funding.

I did do a little statistical regression equation looking at the published NSF overhead rates as of two or three years ago for about 100 different schools, and I compared that with other indicators of the eliteness of the school including their endorsement money per student, and it was interesting. The richer schools were getting the higher percentage rates.

Now, it is true, as Mr. Luther says, that there are special circumstances in some situations that might lead to some legitimacy in the differences of cost, but my university, a little school in Appalachia with a modest endowment, has an overhead rate of about 50 percent. In 2013, Harvard had 69 percent. And it is literally true if you walk into a building in Cambridge, Massachusetts, the floors are marble. I mean, they're nicer buildings. I mean, what the hell? I've been teaching at universities 52 years, and I've taught at all the universities mentioned here. I have two degrees from Illinois. I have one degree—I get a lot of money from George Mason, from the University of Colorado. I've been at all these schools, and believe it or not, there are differences in the appearances.

So I think it would be wise to ask the GAO to extend their studies further. What does Britain do? Take another country. What

does Canada do? Why are the—why would McGill University or the University of Toronto be much different than American University? What to the Canadians do? I don't know. It'd be interesting to know.

To me, a large part of the costs are this back-and-forth negotiations. Why not just set a flat rate and say be done with it?

Chairwoman COMSTOCK. And save the money on the audits.

Dr. VEDDER. Yeah, yeah, yeah. And by the way, I don't know want my remarks to be construed as saying I am against scientific funding. It's a question of how do we divide the pie between the researchers and between the administrative costs.

Chairwoman COMSTOCK. Thank you, and I've gone over my time, so I now recognize Mr. Lipinski for five minutes.

Mr. LIPINSKI. Thank you.

In my previous life, I was an assistant professor and I did get my Ph.D. from Duke. I have been to Ohio University though I have visited there.

But my background, and what I hear from my colleagues, what I hear in this Committee has—the reason why I was so active in working to reduce the regulatory burden and worked to get the Interagency Working Group on research and regulation established in the American Innovation and Competitiveness Act last year.

I want to ask Mr. Bell, what are some of the—what role do you see this interagency working group having in helping to reduce the regulatory burden?

Mr. BELL. What I'd like to do is talk a little bit about the Uniform Guidance, which is a policy document that oversees the indirect cost rate negotiation, and that was born of interagency working groups looking at administrative burden and trying to strike that fine balance between oversight and stewardship with, as we've talked about, freeing up funding to focus more on direct costs. So I believe that there is great opportunity. Administrative burden and interagency collaboration, I think, really need to be viewed within the context of where did the burden come from, where did the cost of compliance come from. So you could come up with a lot of great ideas, which is what I believe that the current reform efforts are associated around. The question is how do you then undo those from a government-wide level. So I believe that they will be great sources of information for administrative burden.

And then the real effort will be, how do you then unpack that? Is it coming from legislation, is it coming from individual regulation? The Uniform Guidance I believe did an admirable effort in trying to strike that balance between stewardship and between owning the partnership in the sense that our awardees are responsible to make sure that they're doing the best that they can with the funds that they receive.

Mr. LIPINSKI. Thank you.

I want to move on to ask Mr. Luther, Dr. Vedder claims that universities make a profit on indirect cost reimbursements from the federal government. It's my understanding that due to eroding support from state appropriations, public universities are contributing an increasing amount of their own institutional funds to cover the costs of conducting research. What is your response to the assertion

that universities are making a profit on indirect cost reimbursements?

Mr. LUTHER. That's a great question. At Duke, we contribute about $30 to $35 million of administrative costs. We're about six points over the cap. Now, one might argue that that's administrative bloat. I can assure you that's absolutely not. That is directly related to two things: adding administrative infrastructure to support the faculty. Right now there's multiple studies that suggest that faculty spend about 42 percent of their funded time doing administrative and compliance activities. Our job as administrators is to do the types of things that let them do the research and we do the administration.

The other thing we've been doing as we've discussed in September, eight months ago, from the perspective of new compliance requirements, new compliance requirements are coming out at the rate of about six or so a year, new regulations. When that happens, we spend money on technology, on business processes and people to manage it. But there is absolutely no incentive for us to hire additional administrators because we pay for every penny of it.

From the building perspective, we lose money. We don't get anywhere close to recovering the cost of a building regardless of the type of research, and in support of this testimony today, when we submitted our indirect cost proposal to Health and Human Services for negotiation, I looked in a handful of buildings, and the example I'm about to explain is representative. A 10-year-old building, the costs for depreciation and O&M operations and maintenance—is in the range of $9 million. We recover somewhere in the neighborhood of $2–1/2 million. We subsidize the research mission in that building $7 million.

So I do agree that some of our buildings have marble floors, but that's not what drives up the cost. What drives up the cost is that to support that research, you have to purchase a $2 million DNA sequencer in the lab to support that. A piece of that is in the indirect cost rate. You have to put in special HVAC and all the other things that we've talked about to manage that research. It is not—I would suggest it's not the marble when you walk in the lobby. It is everything else that goes to conducting that top-notch research.

Mr. LIPINSKI. Well, I have to say I didn't—none of political science buildings had marble floors, so that's all I know.

My time is up. I yield back.

Chairwoman COMSTOCK. I now recognize Mr. LaHood.

Chairman LAHOOD. Thank you, Chairwoman Comstock.

Mr. Bell, I was going to ask you a question here. I referenced earlier in my statement about National Science Foundation Office of Inspector General had released several, I guess, routine audits regarding several universities and research institutions and their use of indirect costs to cover travel expenses. As a result of one of those audit reports, the OIG is pursuing an ongoing investigation into the misuse of federal grant dollars for travel unrelated to the purpose of the grant, which was awarded to cover the development of a research institute. The OIG has questioned over $36,000 in travel expenses including over $12,000 covered by indirect costs.

Mr. Bell, because this case was egregious enough to warrant an ongoing investigation by the OIG, what measures does NSF take to track indirect costs and ensure that federal funds go toward direct research expenses and not other things?

Mr. BELL. Thank you for the question. So in terms of tracking costs both direct and indirect, there are a number of activities that NSF uses. One of them is one that you have pointed out, which is the oversight and analysis done by our Office of Inspector General. That is one way in which we ensure that the policies and procedures are in place—OIG audits.

Another mechanism that we use is something called single audit. Any organization that expends over $750,000 of federal funds is required to conduct an audit, and that audit looks at internal controls, looks at financial statements, and that information is then summarized in the audit and then uploaded to a federal audit clearinghouse, and the idea here is that we don't want just any one agency getting access to this information. Cognizant agencies for audits are responsible for taking those single audits and reviewing them and resolving those audits to ensure these organizations are meeting the expectations outlined in the Uniform Guidance.

The third thing that we do is, we have advanced monitoring programs, both where we do some transaction testing on site to ensure that internal controls are in place, and we do transaction testing at a baseline level where we randomly check various transactions, track them back to how those costs were reimbursed, how they were spent, both from a direct and an indirect basis.

Chairman. LAHOOD. And I guess following up on that, Mr. Bell, have you found that those mechanisms that are currently in place have had a deterrent effect on any other type of egregious allegations and that it has worked well or is in need of review?

Mr. BELL. So to begin with, we are in full compliance with the Uniform Guidance on oversight monitoring and indirect cost rate management, so that's our starting point. In terms of how we're doing, we believe that our advanced monitoring program and the other points with which we interact with awardees in fact does protect and serve the taxpayer. An example is we'll often during our advanced monitoring uncover things that don't seem right to us that could border on fraud. We forward those to the Office of Inspector General for investigation. We also work very closely with our Office of Inspector General during audit resolution. Resolution is the point at which the management takes that information and figures how best to move forward including things like the returning of funds or corrective action to support internal controls.

Chairman. LAHOOD. And you're confident with the system that's in place now?

Mr. BELL. I am. I am, and there is always room to get better. With over 2,000 awardees and 45,000 active awards, there's always an opportunity for us to improve, which is why we appreciate the oversight from this organization and from my colleague to the left at GAO.

Chairman. LAHOOD. Thank you. Those are all my questions.

Chairwoman COMSTOCK. I now recognize Mr. Beyer.

Mr. BEYER. Thank you, Chairman Comstock.

Mr. Bell, in Dr. Vedder's presentation, he made an argument for uniform national reimbursement rate, and among other things, he said that the current system of negotiated rates favors the wealthier schools over other institutions, you know, HBCU schools or smaller state schools and the like. How do you respond to that, and why is that insight not correct?

Mr. BELL. So my first response is that we are the cognizant agency for about five percent of the organizations that receive NSF funding, and 91 percent of those organizations are colleges and universities, for which the cognizant agency for them is HHS and ONR.

Mr. BEYER. Let me jump beyond that. I realize that you aren't determining the rates because you're not the cognizant agency but you still have to administer those 22,000 grants, the $7 billion. So whoever makes the rate, they're negotiated now across all 100 percent.

Mr. BELL. That's correct.

Mr. BEYER. Does the negotiated rate actually help the Harvards and the Princetons and disadvantage the Virginia States and the Norfolk States?

Mr. BELL. I wouldn't be able to give you specific information but perhaps I'll give you a general statement. A cap means that some organizations would have to—would under-recover indirect costs, and as we've described, indirect costs are real costs in support of executing research. So a cap could mean that organizations would not be able to recover. Some organizations are in a better position to absorb under-recovery. Those would be organizations who have access to other types of funds, which could include endowments, could include raising tuition, or other sources of funding. So organizations that are unable to absorb that under-recovery would not be able from an economic standpoint to actually participate in the research enterprise.

Mr. BEYER. Okay. Thank you.

Mr. Neumann, again, referring to Dr. Vedder's comments, number one, he pointed out that the research grants are so good for colleges and universities that they actually give kickbacks to the professors who get them and that they're incentivized to get more. He also suggested later that in arguing for uniform national reimbursement rate that if 30 percent were adopted, universities would complain bitterly but still apply for grants as vigorously as ever.

From a Duke perspective, is that how you guys feel about the grants, kickbacks, and would you compete as vigorously as ever with a 30 percent cap?

Mr. LUTHER. So two questions. With regard to the kickback, we do return some of the recovery back to the department and to the school but we do that because that's where the cost is, so 20 years ago we didn't do that. We kept much of the indirect centrally and we paid rent centrally, we paid facilities centrally, and there was no incentive for the schools to manage their space effectively. When the revenue follows the cost, the incentive is completely different. So if they have vacant space, that space that they don't pay for, they don't get any indirects related to that, and it's managed centrally so that it can be used more effectively.

So the kickbacks, I would say the first point on that is, the indirect costs are reimbursement for costs that we already incurred. The fact that the revenue comes in and we do something else with it I would suggest is completely irrelevant. But secondly, as I just stated, the reason we return that back to the faculty member, back to the department is to incent responsible behavior and because, as I mentioned, Duke contributes somewhere in the neighborhood of $125 million a year to the research mission sending that back to the department so that they can buy computers, which are difficult to purchase on grants, so that they can fund post-docs and graduate students, which aren't always funded on grants. That's why we do that type of thing. And I'm sorry, I forgot the second question.

Mr. BEYER. If there were a 30 percent cap, would you pursue the grants as vigorously as before?

Mr. LUTHER. What troubles me about that is, I don't know what the long-term impact on that is, but you wouldn't have the breadth of the research institutions you do now. We fund that $125 million a year of the research mission that the federal government doesn't fund with philanthropy and with clinical margins and other things. I don't know how other institutions would do that with pressures on tuition, with smaller endowments and so forth. Right now the way the research works now is the research is solely focused on the institution that submits the best proposal from a scientific standpoint, from a peer-review standpoint gets the award, and sometimes we absorb more indirect costs than others but that's how the system works. It's not about funding. It's not about the indirect costs.

Mr. BEYER. Thank you. Mr. Chair, I yield back.

Chairman. LAHOOD. [Presiding] Thank you. I now yield five minutes to Mr. Palmer.

Mr. PALMER. Thank you, Mr. Chairman.

Mr. Neumann, why do university awardees receive the highest averaged budgeted indirect costs? I think it's 27 percent in 2016 compared to other awardees?

Mr. NEUMANN. Well, we're still evaluating the reasons for that but NSF has told us, you know, some of the things that they believe goes into that, and a lot of it is just the nature of the research being done, the facilities that are needed for that research, and I think the important thing is, we're looking at the data at a high level, and to really understand what that data means, you need to go down to almost an award-by-award level so you're comparing apples to apples, you know, university to university to see what you're paying for the same type of research, and so I think that's the level of analysis you would need to understand some of the reasons for the universities being higher.

Mr. PALMER. We're talking about an average so that means it's pretty uniform, routine that it is higher. I think it raises some concerns about the budgeted indirect costs.

Let me ask you this. For an organization to be reimbursed for indirect costs, it must have a negotiated indirect cost rate agreement with the federal agency. How can this process be improved at NSF?

Mr. NEUMANN. Sure. I think what we're seeing is that there should—we'd like to see consistency in applying the guidance for the rate-setting process, make sure that there is supervisory review, and that the guidance is clear. I think that's going to be really important to ensuring that you have, you know, effective processes for managing indirect cost rates, having, you know, the data being helpful in identifying where the indirect costs might be growing if they are having that guidance and ensuring that staff are implementing it correctly.

Mr. PALMER. Your agency, the GAO, released two reports on NIH and indirect costs. Were you findings for NSF similar to those previous findings or were there any significant differences?

Mr. NEUMANN. On the rate-setting process, we had similar findings in the NIH report where we saw some—there could be some improvements in the internal control for the rate-setting process including supervisory review and having clear guidance, particularly for changes that came out of the Uniform Guidance in 2014.

Mr. PALMER. Well, GAO cited some deficiencies in oversight of grants, indirect cost claims by agency watchdogs. Are we seeing adequate amount of scrutiny on these grants, on the indirect cost claims?

Mr. NEUMANN. Well, the NSF IG has continued to monitor that and has done a number of audits over the years and continues to do that, and we understand NSF has some things in place that they do to monitor the expenditures, but we did note in our statement that NSF doesn't have complete data on expenditures of indirect costs. It's more done at the planned award budget level. So NIH, for example, does have that data on indirect cost expenditures that may be useful if you were trying to monitor any improper use of indirect costs.

Mr. PALMER. Well, Mr. Dodero and I have had several conversations about the problem of improper payments and how do we stop that. Let me ask you this. What are the penalties for organizations that have found to have charged inappropriate indirect costs? Are they penalties sufficient to ward off bad actors? And by the way, just for the rest of the Committee's information, the improper payments last year were $133.7 billion. That's money we had to borrow since we're in a deficit, so I'd like to know if there's anything that we can do at any level of the federal government, and particularly right here, since that's the topic of this hearing, to ward that off?

Mr. NEUMANN. I think there's some similar themes in terms of this case as well, and that would be just having the data, analyzing that data to know where there might be anomalies and then being consistent in implementing the guidance for the indirect cost rate process and having the ability to review that information when expenditures come in.

Mr. PALMER. I appreciate your answers. I thank the witnesses for being here today. Mr. Chairman, I yield back.

Chairman. LAHOOD. Thank you. I yield five minutes to Mr. McNerney.

Mr. MCNERNEY. Well, I thank the Chairman and I thank the Committee for having this hearing. My daughter's a research scientist, and this is an area that's very dear to her.

Mr. Neumann, Chairman Smith in his opening statement claimed that indirect costs are increasing over time. Do you agree with that assessment?

Mr. NEUMANN. We noted variation in the indirect costs over the 17-year period we looked at from 16 to 24 percent, and there was increase from 2010 to 2016 if you look at just those years. What we haven't looked at yet is what is the reason for that, what's behind that data. Are we looking at increases in the amounts of cost for the same types of awards or is it just the mix of research that goes into each year that's different from year to year and so there would be different types of indirect costs included in there.

Mr. MCNERNEY. Thank you.

Mr. Luther, you indicated that federal funding does not cover the indirect costs at the universities. What is your understanding of why universities are unable to recover their costs?

Mr. LUTHER. Could I address the previous question just for one moment?

Mr. MCNERNEY. Sure. Absolutely.

Mr. LUTHER. What we've seen and I think it's actually federal data is that at least as far as NIH, one funder, that the rate of 27, 28 percent has been consistent for decades. So the funding has gone up, F&A has gone up, regulations have gone up, but as a percentage of the direct funding, it's been relatively stable.

Mr. MCNERNEY. Okay. Thank you.

Mr. LUTHER. With regard to why we can't recover, I think there's a number of things. One is the administrative cap that was put into place in 1991 caps all administrative costs at 26 percent. That number has not been indexed up. It's been 26 percent for 27 years. And as I've mentioned, the regulatory requirements have changed significantly, and so the compliance requirements have changed significantly. And again, we absorb every incremental dollar of administrative or compliance activities from the A part of the F&A.

With regard to the facilities, again, I would suggest that the cost of research is increasing significantly based on the type of research we're doing. So again, as the federal budget tightens sometimes, Duke University, many universities, public, private, big and small make decisions to purchase equipment to do things different—to build buildings, to renovate existing space to meet the new type of research that's coming down the pike. It's expensive, and we don't recover all those costs. That's known going in, but from the standpoint of what does it mean to have a state-of-the-art building that supports, whether it's a Nobel prize winner or a researcher, there's undergraduate students, graduate students that interact through those labs, the ecosystem, the value of that across the entire ecosystem is significant, and so we know going into those decisions that we build buildings for that broader base.

Mr. MCNERNEY. Well, Mr. Vedder described a vicious cycle in which indirect costs go to justifying indirect costs. Could you respond to that?

Mr. LUTHER. Well, so I would suggest the competitive cycle's really critical. The hit rate on grants has dropped significantly so there are a lot of proposals that are being submitted. But as far as institutions that there's incentive to spend administrative dollars or F dollars, the facility costs, we pay every incremental dollar

for administration, and again, for every research dollar that comes in the door, we pay 30 to 40 cents on the dollar. So we're not making money on the research endeavor whatsoever.

Mr. MCNERNEY. The National Laboratories don't seem to be represented here this morning. Can anyone speak to the—or can anyone quantify any difference in overhead at the national labs as opposed to the universities? I guess that you would be you, Mr. Neumann. You're shuffling through papers.

Mr. NEUMANN. So we did have a category in figure 2 of our statement for federal and that included the National Laboratories. It was eight percent. But again, we're still evaluating, you know, what the differences mean. This is just high-level data that lays out what the actual percentages were for the one fiscal year, so we'd want to do a little more evaluation to understand what's behind that number.

Mr. MCNERNEY. So you wouldn't have an explanation for that difference?

Mr. NEUMANN. No, but we can get back to you with a response for the record.

Mr. MCNERNEY. I would appreciate that.

Mr. Luther, what—well, I'm out of time so I'll just yield back.

Chairwoman COMSTOCK. I now recognize Mr. Hultgren for five minutes.

Mr. HULTGREN. Thank you, Chairwoman Comstock. Thank you all for being here. This is an important conversation for us to continue to have and I'm really grateful. It's so important for us as we go back talking with our constituents to make sure that we are getting the best bang for taxpayer dollars in research and committed to making sure that the resources continue to be there.

I've been a staunch advocate in our role as federal government in basic scientific research funding and the research that really can't be done by the private sector, the stuff that we have to be doing, and recognizing often unintended results decades after initial results that again the private sector just can't put a plan together to do that, but that's the kind of work we see every day in our great research and in our labs.

I'm also looking for ways in which we can do this in the most efficient manner as I know all of us are. The compliance costs and regulatory burdens for universities I believe is too high, and with the passage of the American Innovation and Competitiveness Act, I hope these processes we'll put in place will be able to tackle that problem.

At the end of the day, I'd rather have more taxpayer money going to research than new lawyers or compliance officers. Many of us would share that.

This hearing has been focused on facilities and administrative costs, or F&A, where we could have greater transparency and potential savings. I've heard from a number of my universities that they actually spend more on F&A than are reimbursed by the government, most showing a reimbursement rate of about 75 percent.

I am wondering, and I'd kind of throw this out to all of you, regulatory compliance contributes to the cost of F&A. What actions could the federal government take to reduce this regulatory burden and help ensure that researchers' time is spent productively? I'll

throw it out to any of you if you have a thought or two. Mr. Neumann?

Mr. NEUMANN. Yes. Last year, we issued a report regarding the federal research requirements for universities in particular, and we identified a number of opportunities for streamlining some of the requirements. Even though we have the Uniform Guidance that OMB put out, agencies still have some flexibility in implementing those guidance, and—that guidance, and we found agencies did do so differently and so that created some additional workload for the universities that we met with.

Mr. HULTGREN. Mr. Luther?

Mr. LUTHER. The only thing that I would add to that is, you know, as we collectively look at this, whether it's COGR or AAU or the Federal Demonstration Partnership, which is a combination of universities and federal representatives that work together on these things, you know, I think our greatest concern is that much of this burden falls on the individual faculty members, so they're the individuals that should be in the lab getting the work done and instead they're doing compliance and administrative responsibilities. So we take that very seriously.

The other part is just the sheer cost of that, and I think over the past six months and certainly longer than that, there is a growing list of recommendations. Again, from my COGR role, we have a number of lists that we would suggest opportunities for reducing burden, and this isn't suggesting that the regulations all in all are bad around human subject management but it's suggesting that there's betters ways to do it with less burden. And so I think there's lots of opportunity to address those types of things, and again, I think in the GAO report and the National Academies report from a year or so ago, there were great recommendations along those lines.

Mr. HULTGREN. Mr. Luther, maybe you can drive in a little bit deeper on that. In your testimony, you talked about the regulatory burdens for carrying out federal research. As we cut to those regulatory burdens on academic research, isn't there an opportunity to also bring down administrative costs as well?

Mr. LUTHER. Yes, I think there is, absolutely. You know, but again, to state that, reducing the regulatory burden is a great idea. That's not necessarily going to have any impact on the F&A costs because, again, we're many points over the administrative cap, right? So reducing that burden reduces the ability to direct those funds towards programmatic missions, academic, research and other missions so absolutely, that's what we should be focusing on.

Mr. HULTGREN. Mr. Neumann, with the seconds I have left, for an organization to be reimbursed for indirect costs, it must have negotiated an indirect cost rate agreement with its cognizant federal agency. How can this process be improved by NSF?

Mr. NEUMANN. As I noted previously in my statement, we are seeing some opportunities for the NSF guidance to be implemented consistently as well as opportunity to provide more details to the NSF staff so they can be consistently implementing the guidance particular when it comes to supervisory review and then applying the uniform guidance changes that came up in 2014.

Mr. HULTGREN. Thank you. My time is expired so I yield back the balance of my time. Thank you, Chairwoman.

Chairwoman COMSTOCK. I now recognize Dr. Marshall.

Mr. MARSHALL. Thank you, Chairwoman.

My first question, I think Mr. Bell or Mr. Neumann can answer it. Let's suppose the top biosecurity research center in the country, Kansas State University, has ten different studies they're doing. When you negotiate an indirect expense rate with them, cost, do you do it per study or does the university just get one negotiated for the year?

Mr. BELL. So because it's a college or university, it is negotiated either by HHS or ONR. It is done at an organizational level, not an award-by-award level.

Mr. MARSHALL. And at the end of each year you go through the finances and you reconcile that, so to speak?

Mr. BELL. It depends on the type of rate that is negotiated. I believe HHS and ONR typically use four-year predetermined rates, that is, they look at the stability of the organization and whether or not the ratio fluctuates over time and then they establish a predetermined rate. Now, that predetermined rate means that you only negotiate it once so you're reducing administrative cost. However, you can potentially under-recover with no recourse or you could potentially over-recover. And you're exactly right that the basis of these negotiations are audited financial statements or other financial information.

The other thing is that cognizant agencies have the flexibility for creating a rate structure to most equitably distribute costs. So one study may have a different indirect cost rate if it in fact is using a totally separate set of infrastructure, and this is why I think this topic is "sexy" because there is a lot of complexity. It's an easy concept: how do we share these indirect costs appropriately? The hard part is, well, what's the best way to do it, and currently, Uniform Guidance really provides the way that at least we're doing it all the same way across the government.

Mr. MARSHALL. Okay. Mr. Luther, this one's for you. As I understand it, foundations and philanthropic organizations account differently for research expenditures, allowing some costs to be included as direct research expenditures at the federal government does not allow. Can you talk a little bit about apples and oranges in the way we're comparing foundations will pay for F&A costs versus the other entities?

Mr. LUTHER. Certainly. So you're exactly right. The foundations will often pay for the things the federal government won't, number one, and number two, when they apply that rate, it generally applies to all costs. There's no modified total direct cost. And so the recovery mechanisms and the costing mechanisms are truly different. And as I mentioned briefly, many times foundations fund research that's considered off campus so truly the rate that is compared to many foundations should be to like a Duke University's off-campus rate, which is 26 percent, as opposed to our full rate because of the type of research that's being conducted.

Mr. MARSHALL. Okay. I'm going to stick with you, Mr. Luther. My universities obviously are very concerned about this and are helping to educate me. Is it also your understanding that the cur-

rent OMB rules strictly prohibit federal reimbursements that will subsidize research sponsored by foundations when they don't pay for full cost for research including the required F&A costs?

Mr. LUTHER. That's correct. So we just submitted our indirect cost proposal to Health and Human Services three months ago, and in that proposal, the way we developed the cost allocation, the sexy aspect of the cost allocation is to make sure that the federal government does not subsidize one penny of foundations, industry or anything else. It's just the structure defined by the Uniform Guidance doesn't allow that to happen.

Mr. MARSHALL. My last question. Why is there a difference in the rate non-federal research sponsors pay for these facilities' administrative costs?

Mr. LUTHER. So again, many of these foundations have a different mission and a different relationship to universities. As we talked about in the very beginning, this partnership was about the federal government going back 50 years sharing in the development of the infrastructure. The Gates Foundation is paying for incredibly important research at Duke University, and it's partnering with Duke and NIAID around creating an AIDS vaccine, but it's funding some of the incremental and critical costs that allow that research to continue, especially when there's been federal funding gaps.

Mr. MARSHALL. I'm going to squeeze in one question. I think it's back to Mr. Neumann and Mr. Bell.

Mr. Luther says there's geographical differences. Why would that matter? If electricity is cheaper at Fort Hayes State University or Kansas University than it is at North Carolina, why can't we use that to our advantage in saying that we can actually do more with less as long as our outcomes are good?

Mr. BELL. So really, the issue there is that whether or not an idea, or the location of an idea, or whether a researcher comes up with an idea; it's the value of the idea and the potentially transformative nature of that idea, and that should not be a component of evaluating whether or not we should fund it. So if you have a full portfolio that you're reviewing based on the merit review criteria—that's intellectual merit and broader impact—those are the drivers on whether or not you try to fund something, not whether or not their indirect cost rate is high or low.

Chairwoman COMSTOCK. And actually I'd like to follow up.

Dr. Vedder, you had talked about maybe taking in competitive factors and other things into account. So can you expound upon that a little bit on evaluating research proposals how if there weren't going to be a cap because that could have other issues with it, what kind of factors and how would they be utilized? And I'm thinking in the context of having a more diverse research pool but also sort of getting more bang for our buck and then maybe providing an incentive for some of the others that have high overhead cost to maybe finding their way to balancing it if that were a competitive factor?

Dr. VEDDER. Yeah. As I understand research grants now, when a group of scientists evaluates an NSF proposal, they view it strictly on its scientific merit—is this the best proposal—and they rank a series of proposals from best to worst, and they're putting pri-

mary emphasis on the quality of the research. But in the real world, we have resource constraints and dollars matter. You ought to know that here in Congress with all the budget talks and so forth.

So what is wrong with the idea that after we've done the consideration of scientific merit on a proposal and that we make that the prime determinate of whether the award will be made that we couldn't give some secondary weight to how little money the university asks for the non-purely scientific dimensions of their research? Why shouldn't a university be able to bid as we bid in everything else in life, and if we are willing to do the work at a low cost in terms of the administrative side of things, why shouldn't that be given some favorable consideration in the evaluation of the grant? That was one of my research ideas.

The other thing I pointed out, Chairman Comstock, was we spend an awful lot of time talking to researchers and auditing, investigating, checking, did you do this, did you do this, is this over the cap, is this under the cap. There's a lot of people, and I talk to researchers all the time and says there's too much of that, why don't you just put a—this is another approach. It's a different idea. And it's been introduced before. The Obama—it's a nonpartisan thing the Obama people—it was pushed in the Obama Administration. Why don't we just put a flat rate? We can argue whether the rate ought to be 20 percent or 30 percent or what. Everyone will get that. The basic research grant will be approved, whatever, and then we'll add that on, and we won't spend as much time and resources as we do going through all this other stuff.

So those are two alternatives approaches that I think at least ought to get some discussion. I'm not talking about the amount of money on scientific research here. I'm talking about the allocation of that money between alternative uses, and that's an altogether different issue, and so that's—I don't know if—that probably didn't answer your question.

Chairwoman COMSTOCK. No, that was——

Dr. VEDDER. But I'm a college professor with tenure and I answer any question I want.

Chairwoman COMSTOCK. Thank you. I appreciate it. Did anyone else have a comment on that? Mr. Bell?

Mr. BELL. So Dr. Vedder does point out that merit review is a primary component of the NSF approach. We have panelists of experts that evaluate against the two criteria, intellect merit and broader impact. Our program officers then use merit review as a component of trying to decide what is the correct, or the best portfolio, so that may mean that it's not just merit review, it could be that there are two ideas that are both equally good but you may just need to fund one of them. So it's not whatever scored highest gets funded. There are experts, program officers who are responsible for managing that portfolio.

Chairwoman COMSTOCK. So you're suggesting that some of that's already being incorporated? So it would be like if a college got two exceptional students that are equal otherwise, they might look and say but this person has had a tougher time or, you know——

Mr. BELL. That's exactly right.

Chairwoman COMSTOCK. —or fewer opportunities and so already factor some of that in now?

Mr. BELL. Right. We have program officers bring their expert judgment to the table. It's not rack and stack, draw a line, you're done. It's do we have enough geographic diversity, do we have enough new awardees and established awardees. So there are other factors that play into the merit review process.

Chairwoman COMSTOCK. Thank you. And Mr. Lipinski, I'll recognize him for second round.

Mr. LIPINSKI. Yes. Thank you, Chairwoman.

I want to follow up. I understand—I appreciate the fact that Dr. Vedder has tenure and can say whatever he wants to say. I want to follow up on the proposal that Dr. Vedder had for scoring research proposals in part based on what they would cost. I understand sort of on the face of it it makes some sense. Now, NSF never did exactly that but in the past they did favor research proposals that came with higher cost-sharing commitments. In 2004, NSF ended voluntary cost-sharing except for unique programs such as the Industry-University Cooperative Research Centers.

Program officers are always under pressure to stretch their budgets as far as possible, and when cost-sharing was used as leverage in negotiations, scientific merit and impact was too often downgraded as a factor in award decisions. That was the concern that NSF had and why they ended that. So I want to ask Mr. Luther what your thoughts are on the effect Dr. Vedder's proposal to score research proposals based on cost would have on research and researchers ta university?

Mr. LUTHER. Thank you. A couple thoughts. My first thought is, I mean, I completely get the idea of factoring in cost. My concern is that would significantly reduce diversity. It's going to be universities that can cost-share the most that are going to win those awards, and that's—as a large private, that certainly benefits a university like Duke. I don't know that it benefits the broad research mission. And that would be my greatest concern, number one.

Number two, you know, we often make decisions on cost, and I was talking to a faculty member several days ago about a grant that was trying to maximize how many genomic array tests it could do, and the individual had X amount of money. We went out to the lowest bidder, and when it was all said and done, the quality that came back wasn't sufficient, and we had to rerun all of those tests internally at Duke's expense to make sure that the data was valuable.

That's my only concern about factoring in the cost too much is that would reduce diversity across institutions, and sometimes—and as economist you would probably agree, sometimes you get what you pay for, and my concern is that diversity and the best science should always be number one.

Mr. LIPINSKI. The concern that I have is that you start a race to the bottom in some ways and that some universities will just start cutting that because they're looking—they don't have enough of a view of the long run and the long term. We certainly see, especially—I'd asked earlier about public universities. I know public universities are under a lot of pressure right now. Certainly the

University of Illinois is. And I would sort of hate to see it be a situation where we need the money in the door right now so let's say our indirect costs are going to be lower, and in the long run then you're really—again, you're giving up. Your facilities are just going to suffer. Everything for the long term, in the long run is going to suffer for the immediate impact of maybe getting more research dollars in the door today. So that's also a concern that I have.

I thank everyone very much for their testimony on this. It's certainly an important issue. We all want to stretch research dollars as much as we can, and I think we should continue this discussion, and as Chairwoman Comstock said, we've worked on reducing regulatory burden. I think on this Committee we have that role of helping with that, and I want to continue to make sure that we do that.

So I yield back.

Chairwoman COMSTOCK. Thank you, and I thank the witnesses for their testimony and their insight today and the members for their questions. The record will remain open for two weeks for additional written comments and written questions from Members.

And the hearing is now adjourned. Thank you.

[Whereupon, at 11:45 a.m., the Subcommittees were adjourned.]

Appendix I

Answers to Post-Hearing Questions

ANSWERS TO POST-HEARING QUESTIONS

Responses by Mr. Dale Bell

HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

"Examining the Overhead Cost of Research"

Mr. Dale Bell, Division Director, Institution and Award Support, National Science Foundation

Questions submitted by Ranking Member Daniel Lipinski, House Committee on Science, Space, and Technology

1. Critics of U.S. universities' indirect cost rates for federally funded research point to lower indirect costs rates in some countries as well as lower indirect cost rates for philanthropic funding to universities. Mr. Luther started to address this in his testimony. How useful do you believe these comparisons to be? What level of detail would you need to know about each country and each philanthropist's funding models to make meaningful comparisons?

   Answer: Indirect cost rates are organization-specific and based on a detailed analysis of historic, verifiable cost data incurred by that organization. Comparisons of indirect cost rates of domestic, foreign, or philanthropically-funded organizations therefore require a full understanding of the cost base methodology being used. Philanthropic organizations, which are not bound by OMB's *Uniform Guidance* requirements for allowable indirect expenses, categorize more of their expenditures as direct costs, which lowers their apparent indirect cost rates. There are also difficulties in comparing U.S. indirect cost rates to other countries' indirect cost rates, due to major differences in the policies for calculating such rates. The mechanisms and formulas used to calculate indirect costs vary from country to country. Where indirect costs are reimbursed as a percentage of direct costs, inclusion or exclusion of certain categories of cost (e.g., researcher salaries) from the direct cost base will have a major bearing on the final reimbursement.

   Some of the major factors influencing differences in indirect cost rates are the following:

   Type of Research or Scientific Fields Supported – A major difference in indirect cost rates is based on the type of research being conducted and the facilities, equipment, and staff/skill mix required on site. For instance, research requiring secure biomedical research laboratories, astronomical telescopes, deep sea submersibles or advanced physics research facilities is costlier than research to conduct economic surveys or to develop and study field collections of biological species. While all these activities contribute to scientific advancement, very different levels of "shared costs" are associated with the types and fields of scientific research being performed.

   Location of the Awardee Organization – Major metropolitan areas generally have higher costs for land and living expenses than more rural areas. In these areas, higher salaries are therefore needed to attract qualified and competitive staff. Geographic-related costs impact indirect costs rates.

Regulatory Requirements – Costs of requirements for managing research efforts contribute to indirect costs borne by universities. In the U.S., such costs include compliance with statutes and regulations protecting the welfare of research subjects, provision of staff and systems support for independent audits, implementation of safety and hazardous substance protective measures, and maintenance of effort reporting systems.

Classification of Costs as Direct or Indirect – Another factor that creates variance of indirect cost rates is the way in which organizations classify costs. Organizations are provided flexibility through the OMB *Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards (Uniform Guidance)* when classifying costs as direct or indirect. For instance, one organization may classify Information Technology infrastructure as an indirect cost and include this in the indirect cost pool in its entirety. Another organization might directly allocate Information Technology costs by a set amount charged per year per computer. A third entity might charge a base portion of their IT support function as indirect costs while also charging user support for computer station repairs by job ticket as direct costs.

Application Base – The direct cost base on which the indirect cost rate is distributed or applied also impacts the indirect cost rate calculation. Generally, for U.S. colleges and universities, indirect costs are calculated on a Modified Total Direct Cost Base (MTDC). The MTDC is typically defined as total direct costs excluding equipment, participant support costs, and sub-awards in excess of $25,000. Comparisons of rates are further compromised by limitations for certain functions (e.g., administrative costs of academic institutions capped at 26% under the *Uniform Guidance*) or for requirements imposed under certain federal programs. Philanthropic organizations, not bound by *Uniform Guidance* requirements for allowable indirect expenses, categorize more of their investments as direct costs thus lowering their apparent indirect cost rates.

2. It is helpful to us as policy makers to understand the total costs of research, and the respective shares paid by the Federal government, institutions, and other partners. Right now we have a situation in which the negotiated indirect cost rate reflects - or at least should reflect - the true facilities and administrative costs to institutions. But the way the rate is applied to different cost bases is complicated and rarely explained well to policy makers, leading to confusion about who is or should be paying for what. Do you have any recommendations for how to make the system more transparent?

Answer: The indirect cost rate negotiation protocol is set forth in OMB's *Uniform Guidance*. The objective of the process is to ensure that the Federal Government pays an equitable share of indirect costs directly attributable to the federally-sponsored research being supported.

NSF's policies related to the reimbursement of indirect costs can be found within the *Proposal & Award Policies & Procedures Guide* (PAPPG), at: https://www.nsf.gov/pubs/policydocs/pappg17_1/pappg_10.jsp#XD.

NSF continues to look for ways to strengthen the Agency's stewardship of the research enterprise, in order to ensure efficient and effective use of taxpayer dollars for science research and education. Accountability and oversight for indirect costs results from pre- and post-award efforts on the part of NSF and the organization for which NSF is the cognizant agency.

Organizations for which NSF is the cognizant agency for negotiation of indirect cost rates and which do not have approved award specific rates are required to submit indirect cost proposals to NSF's Cost Analysis and Audit Resolution Branch. The indirect cost rate proposal submission requirements are clearly detailed at: http://www.nsf.gov/bfa/dias/caar/docs/idcsubmissions.pdf.

Responses by Mr. James Luther

HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

"Examining the Overhead Cost of Research"

Mr. James Luther, Associate Vice President of Finance & Compliance Officer, Duke University, Chairman of the Board, Council on Government Relations

Questions submitted by Chairman Lamar Smith, House Committee on Science, Space, and Technology

1. The official position of the research university community is that current indirect cost allowances fall far short of reimbursing universities for the full costs of hosting federally-funded research. Nevertheless, the total number of university-based grant applications to the National Science Foundation and other science agencies continues to increase. Furthermore, many universities are prepared to spend even more money in order to recruit high-profile research scientists and build research facilities for the express purpose of attracting more federal research funding. Surely the underlying rationale for these seemingly contradictory circumstances isn't that research universities hope to make up their losses on federal research projects by increasing the volume of such research. Can you please explain?

   Answer: You are correct that universities cannot make up losses on individual grants by receiving more grants. Universities are very clear that we are subsidizing research, according to federal data, 24% of academic R&D - about a third of which is attributable to unreimbursed indirect costs. But as discussed, the universities' objective with sponsored funding is to advance scholarship, national security, health and prosperity – it is not designed to be a net revenue generator. This occurs through the execution of individual grants but also through the synergy between academic instruction and the research mission. Universities are uniquely successful at simultaneously accomplishing grants aims while training the world's future scientific workforce. Just two weeks ago, an article was published about the discovery of a biochemical signaling process that causes the spread of cancer cells. The genesis for this occurred seven years earlier when a university sophomore student raised an idea while spending time in her mentor's lab. As 90% of cancer deaths are related to cancer that metastasizes, this could lead to profoundly positive health outcomes.

   An increase in the total number of university-based grant applications relates to the size of the scientific workforce and the ability of academic scientists to conduct the research they were trained to do. There is a healthy pipeline of scientists, and as the grant environment becomes more competitive, with at times flat or reduced funding, more and more faculty compete for a fixed number of awards in order to continue to support their research and the students and fellows they support; outsized efforts to recruit high-profile researchers is the exception, not the rule.

HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

"Examining the Overhead Cost of Research"

Mr. James Luther, Associate Vice President of Finance & Compliance Officer, Duke University, Chairman of the Board, Council on Government Relations

Questions submitted by Ranking Member Daniel Lipinski, House Committee on Science, Space, and Technology

1. Critics of U.S. universities' indirect cost rates for federally funded research point to lower indirect costs rates in some countries as well as lower indirect cost rates for philanthropic funding to universities, as you started to address in your testimony. How useful do you believe these comparisons to be? What level of detail would you need to know about each country and each philanthropist's funding models to make meaningful comparisons?

   Answer: Similar to how foundation budgets are developed and rates are applied, international funding for indirect costs are often not an apples-to-apples comparison. At Duke University, we have various relationships with research conducted around the world and many of these entities have completely different "costing" models -- they often apply F&A to all costs expended on the grant (as opposed to select costs in the U.S.), fund many items directly that the federal government would not fund, and often times the buildings are owned or directly funded by the foreign government. We certainly could learn from these other models and a GAO or NAS study in this area could be fruitful. But it should be noted that although not always fully transparent due to its inherent complexity, our current process ensures proper incentives are aligned with the institution's mission and federal objectives while ensuring that federal sponsors only pay for the costs, both direct and F&A, that directly relate to the specific sponsored research being funded.

2. It is helpful to us as policy makers to understand the total costs of research, and the respective shares paid by the Federal government, institutions, and other partners. Right now we have a situation in which the negotiated indirect cost rate reflects - or at least should reflect - the true facilities and administrative costs to institutions. But the way the rate is applied to different cost bases is complicated and rarely explained well to policy makers, leading to confusion about who is or should be paying for what.

   a. What role should universities play in helping policymakers better understand the amount they are contributing to the nation's research enterprise? How important is it for universities to be forthcoming about the level of institutional support for research and the potential impact of further restrictions on overhead cost reimbursement?

Answer: As full and committed partners, I think it is critical that we improve transparency both in institutional costing practices and levels of university contributed & cost-shared funding. There have been a number of studies that have demonstrated that university funding for research is the stream that is growing at the fastest rate and that universities are covering an expanding portion of the regulatory and compliance burden; this is demonstrated by the number of universities that are farther and farther over the 26% administrative cap implemented in 1991. The number of regulations and policies for which universities must comply in order to receive federal funds has dramatically increased since that time. But this trend in increased university support, including unreimbursed indirect costs, is not sustainable in the current financial environment for any institution, but particularly for public universities and private research institutes such as cancer centers with few other funding streams. Improving transparency will clarify the university's commitment to the partnership and also shed light on the unsustainability of a model that continues to push more and more cost and burden to universities.

b. Do you have any recommendations for how to make the system more transparent?

Answer: We have been greatly encouraged by recent federal opportunities for open dialog. The Research Policy Board might take on this initiative as one of their first agenda items. Certainly an open forum that is jointly sponsored by Congress and the research community focused not on the basic F&A question, but more on the essence of the uniquely American research engine that has proven so successful might be in order. The GAO could be called upon to release an analysis that includes both the current models and potentially cost effective models that would be of benefit to both parties in support of this open forum.

I believe it is critical that we not lose sight of the common goal in this debate. The past several decades have seen the growth and huge success to be realized in this unique partnership. I am not convinced that the community has done an adequate job in making sure that Congress, the American public, and our related allies – foundations, international partners, etc. – are aware of how effective this partnership has been and should continue to be. In light of recent discussions, this is critical.

One other option that has been suggested would be to direct charge everything. While direct charging many of the costs, as many foundations and other entities do, might be more transparent, it would also be a much more labor intensive process for both universities and federal agencies given the volume of federal grants versus that for other entities.

3. The Council on Governmental Relations tracks the increase in regulations since 1991, when the 26 percent cap on the administrative portion of indirect costs was imposed. With the increasing regulatory burden, do you think universities can get their costs back down to within the 26 percent cap through greater efficiency alone?

   Answer: One could argue that instituting a cap 26 years ago that was not indexed to inflation or any other metric, in an environment that, by its nature, will increase in complexity and cost is not realistic. There are new areas of compliance and oversight that were not fully comprehended decades ago.

   To this end, it should be noted that federal reimbursement of administrative costs have not increased anywhere near the rate of the increases in federal compliance costs. The rates of reimbursement have been relatively steady. An evaluation of opportunities to reduce both administrative and compliance burden would be helpful, and in fact there are a number of recent reports and recommendations for reducing federal compliance burden but it is not likely, at this point, with many major universities 5-6 percentage points over that cap, that they can be reduced to such a degree that F&A rates could materially be reduced. It is nonetheless still critical that regulatory burden reduction occur as the current level and growth in federal compliance burden is unsustainable. Reforming federal compliance requirements would allow more institutional funds to be redirected to other programmatic missions. Further, burden reduction will allow individual faculty to focus more on their research and less on administrative responsibilities leading to true efficiencies in the use of federal funds.

4. What are the funding options available to universities to recoup unrecovered facilities and administrative costs? Given the decline in support from state appropriations, do private or public universities have more capacity to absorb under-recovery of indirect costs and what are the potential long term implications of this?

   Answer: The short answer is no. As state appropriations to public institutions have been significantly reduced, tuition increases and other revenue sources have been limited, and most universities don't have endowments (and for those that do the funds are restricted by the donors), additional available funds for research are limited. For many private research institutes that agencies rely on for the conduct of critical research, none of these revenue sources are available. As most universities continue to accept a growing portion of the research costs, it is becoming an unsustainable model.

   If the definition of the government-university research funding partnership changes materially or continues to erode, it is likely that there will be fewer research universities in the future and they will be less diverse. Universities will have to specialize in one specific area of research to develop economies of scale; in some ways this is sensible but in other ways it is in direct conflict with the growing desire to make research more interdisciplinary – this interdisciplinary approach supports the collaborative environment

where a basic scientist, an engineer, an oncologist, and a chemist all work together to solve different aspects of the same research objective. It also means that undergraduates, graduate students and post-docs work in a much more collaborative environment. Materially changing this or allowing the current erosion to continue unabated will lead to short and long-term repercussions. The short-term implications will include hiring freezes, lay-offs of faculty and staff, shuttering programs and buildings, and an overall inability to support federal research at the current capacity. The potential long-term implications are less research, slower scientific progress, fewer medical treatments, fewer jobs, and likely fewer universities conducting research and undergraduates and graduate students educated in a research setting.

Again I would like to emphasize how effective and highly productive the current model has been and will continue to be. We have created a global model, realized immense gains, and built a thriving partnership with proven value. While it is realistic to review the process on a regular basis, taking simplistic action to cut or change F&A recovery of already incurred costs will have a serious, long-term and extremely detrimental effect on a partnership that has proven so very successful and beneficial to America.

5. Some have suggested that replacing the system of variable indirect cost reimbursement rates with a flat reimbursement rate might help manage growing costs, redirect more funds to direct costs, and level the playing field. You discussed in your testimony how rates currently vary by region and institution. Can you discuss the potential impact of a flat reimbursement rate on U.S. universities?

Answer: It is difficult to imagine how a flat reimbursement rate would help manage growing costs as it would simply move more of the responsibility for these costs to institutions. The costs charged on research awards, whether direct or indirect, are the true costs of research and universities cannot continue to absorb an increasing share of these costs. Flat reimbursement would simply compel universities to only select that research that they can afford. Universities would compete aggressively for research that is not as F&A intensive and fewer and fewer universities would conduct research that required more expensive infrastructure; such as vaccine development, advanced robotics, and technologies that require costly biohazardous management practices. Universities wouldn't be able to readily afford research that requires special air-handling, scientific equipment, animal modeling, etc.

It should also be noted that with fewer universities and research labs, any increase in direct funding would not be beneficial. Universities couldn't afford to accept these funds as they would further compound the financial loss (unless it was in non-F&A intensive types of research).

HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

"Examining the Overhead Cost of Research"

Mr. James Luther, Associate Vice President of Finance & Compliance Officer, Duke University, Chairman of the Board, Council on Government Relations

Questions submitted by Rep. Jacky Rosen, House Committee on Science, Space, and Technology

1. As someone who spent my career as a computer scientist and systems analyst, I can attest to the fact that overhead costs are real and critical costs of conducting research, and cuts to indirect costs of research are, in fact, cuts to research. You can't do computer science research without high-speed data processing and storage, and that just isn't part of the direct cost of an individual research project. The big mainframe computers I worked with in college weren't purchased for one researcher or one project. That equipment and the maintenance of it cost money, and that money was needed to support multiple students, researchers, and projects. Like back then, overhead costs today can add up to a lot. The University of Nevada, Reno, in my home state, recently told me that increasing overhead costs are in fact hampering the school's ability to conduct research.

    a. If the trend toward higher university contributions to research continues, along with potentially diminished federal support, will universities be able to cover the cost of conducting research? How will research output be affected? How will public institutions fare compared to private institutions?

    Answer: Universities have been funding a growing part of both the research mission as well as the portion of F&A costs. As discussed, NSF estimates it at $16.7 billion and $4.8 billion respectfully.

    As state appropriations to public institutions have been significantly reduced, tuition increases and other revenue sources have been limited, and most universities don't have endowments (and for those that do the funds are restricted by the donors) available funds for research are limited. For many private research institutes that agencies rely on for the conduct of critical research, none of these revenue sources are available. As most universities continue to accept a growing portion of the research costs, it is becoming an unsustainable model.

    The short-term implications will include hiring freezes, lay-offs of faculty and staff, shuttering programs and buildings, and an overall inability to support federal research at the current capacity. The potential long-term implications are less research, slower scientific progress, fewer medical treatments, fewer jobs,

and likely fewer universities conducting research and undergraduates and graduate students educated in a research setting.

Appendix II

Additional Material for the Record

LETTERS SUBMITTED BY SUBCOMMITTEE CHAIRWOMAN BARBARA COMSTOCK

GEORGE MASON UNIVERSITY

Office of the Vice President for Research
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May 18, 2017

Honorable Barbara Comstock
Chairwoman
House Subcommittee on Research
and Technology
Washington, D.C. 20515

Honorable Dan Lipinski
Chairman
House Subcommittee on Research
and Technology
Washington, D.C. 20515

Dear Chairwoman Comstock and Ranking Member Lipinski:

I am writing in reference to the Subcommittee's May 24 hearing to discuss facilities and administrative (F&A) reimbursement rates for non-profit organizations. While I do not have details regarding the full scope of the hearing, I did want to take the opportunity to share with you my (and Mason's) perspectives on F&A rates. Specifically, the recovery of facilities and administrative costs incurred by universities to support cutting-edge research is essential, if US universities are to maintain an active role in fueling the Nation's innovation economy.

Chairwoman Comstock, you and some of your staff, as well as Subcommittee staff, have visited our research facilities and observed firsthand the impact of Federal research investments in our vibrant research enterprise. As you know, our research outcomes have had considerable impact on the economies of Northern Virginia, the Commonwealth, and the Nation. You were able to talk with our faculty and student researchers who shared how their research advances the knowledge frontier, enriches education and the learning outcomes of our students, leads to jobs, and ultimately improves and sometimes saves lives. Our university community is making unique contributions to meeting critical societal needs, such as creating a greatly improved Lyme disease test, identifying new cancer treatments, enhancing our understanding of the role of transnational crime in supporting terrorism, securing our cyber-physical systems, and creating advanced monitoring techniques that improve the safety and cost-effectiveness of our civil infrastructure.

Mr. Lipinski, we know Illinois, too, has first-rate research universities, a number of whom we enjoy active collaborative relationships with on state-of-the-art research projects. Please know we would be delighted to host you here at Mason to share with you some of the groundbreaking work our faculty and students are doing, and to show you the facilities and other support we provide to enable this work.

Mason is a relatively young public R-1 research university – we achieved R-1 designation in 2016. When Mason President Ángel Cabrera testified before your

Committee last September, he discussed some of the challenges Mason faces in building and maintaining research infrastructure essential to supporting the world-class discovery and innovation that fuels our technologically-intensive knowledge-based economy. He described how continuing increases in regulations increase the cost of doing business, while seeking to ensure the responsible conduct of research. Striking the right balance here is critical - something we all are committed to doing. Parenthetically, thank you both for your attention to the issue, as we recognize that much of your legislative proposals have been reflected in the 21st Century CURES Act and in the Defense Authorization bill.

While the cost of performing academic research in the public interest continues to rise, State investments in research and education in public universities are declining. Mason has been able to achieve R-1 ranking while keeping tuition rates among the lowest in the Commonwealth and attaining excellent graduation rates and learning outcomes among all student populations, including an increasing number of community college transfer students. Our university is deeply committed to access, inclusion, and the provision of an affordable world-class education to all.

Like many of our sibling institutions, Mason's F&A rates are set by ONR, and are applied dependent on the type of research activity undertaken and/or its location. Costs recovered by applying the correct F&A rate support both the research infrastructure at Mason that is necessary to conduct world-class research, such as maintenance of our technologically-intensive laboratories on our SciTech campus, as well as administrative activities necessary to comply with federal, state and local government regulations to ensure the responsible conduct of research.

Since the Uniform Guidance issued by the Office of Management and Budget caps the recovery of administrative costs necessary to support research compliance functions, universities are already unable to recover the full cost of doing research sponsored by the Federal Government. In a recent analysis, the University determined that it spends an additional $.18 on research for every dollar received in research awards, demonstrating its ongoing commitment to its research and education mission. The additional costs of doing research are met through philanthropy or are passed on to our students in the form of tuition costs and fees. While our students learn from faculty deeply engaged in innovative research, and from their direct involvement in consequential and impactful research preparing them for today's workforce, such that they are able to enter the innovation workforce prepared to excel, we are deeply concerned about the impact of increasing costs upon our students and their families.

If the Federal Government elects to set lower caps on the recovery of indirect costs from research grants and contracts, the impact on Mason and many other fine universities like ours will be immediate – we would have to opt out of doing research in the technologically-sophisticated STEM fields whose innovations power our regional and national economy, or contemplate the highly undesirable transfer of the cost of doing this research to our students. Neither of these options seems to be in the long-term interests of the Nation.

In closing, I want to thank you both for your thoughtful consideration of these issues, and for your ongoing efforts to ensure our country maintains the robust research enterprise that is essential to innovation and our Nation's economic competitiveness.

Sincerely,

Deborah Crawford, PhD
Vice President for Research

June 7, 2017

The Honorable Barbara Comstock
Chairwoman, Research & Technology Subcommittee
House Science, Space & Technology Committee
Washington, DC 20515

The Honorable Darin LaHood
Chairman, Oversight Subcommittee
House Science, Space & Technology Committee
Washington, DC 20515

The Honorable Dan Lipinski
Ranking Member, Research & Technology Subcommittee
House Science, Space & Technology Committee
Washington, DC 20515

The Honorable Don Beyer
Ranking Member, Oversight Subcommittee
House Science, Space & Technology Committee
Washington, DC 20515

Dear Chairs Comstock and LaHood and Ranking Members Lipinski and Beyer:

Thank you for the opportunity to offer the perspective of research institutions on the important topic of facilities and administrative (F&A) costs of conducting federal research, per the House Science, Space and Technology joint Subcommittee hearing you held on this issue on May 24, 2017. We respectfully submit this letter for the hearing record on behalf of the Association of American Medical Colleges, the Association of American Universities, the Council on Governmental Relations, the Association of Public and Land-grant Universities, the Association of Independent Research Institutes and the American Council on Education.

Our associations appreciate the historically strong and bipartisan support Congress has demonstrated for the scientific research our member institutions perform for the federal government. As the Committee on Science, Space and Technology understands well, the partnership between the federal government and research universities that emerged out of World War II has been indispensable to ensuring our nation's security, improving public health, and enhancing our standard of living. This partnership, where the federal government provides resources so that universities will conduct research on behalf of the government, has fueled U.S. global scientific and economic leadership, resulted in major research advances, and helped to train America's most prominent scientists, engineers, and entrepreneurs. Our institutions continue to make stunning advancements, in areas such as cancer immunotherapy, artificial intelligence, materials science, and behavioral economics, all of which depend on specialized support, physical infrastructure, and human capital.

Research institutions also share the Committee's commitment to see that resources available for scientific research are used optimally and most effectively. F&A costs have been included in federal grants since the 1940s, recognizing that institutions incur expenses related to research that may not be directly attributable project by project, but are essential to conducting research. The most commonplace example is that research labs require heat, lights, power, water, a roof, janitors, etc. of course, modern laboratories are far more complex, requiring sophisticated environmental controls, instrumentation, information technology, and state of the art safety and security to protect personnel and surrounding communities. Depending on the field of investigation, F&A requirements become more varied. Biomedical research, for example, which receives the largest share of federal science funding, depends also on research in clinical environments and medical facilities, use of extensive tissue and sample collections, and scores of professionals to ensure compliance with federal, state, and local regulations on human and animal subject research protections, privacy, health and safety, and for management and technical support.

Attributing these expenditures line-item by line-item on every grant would be an arduous, expensive, and inefficient process, both for the federal government and for the grant recipients. For such reasons, the current government-wide policy of reimbursing F&A expenditures as a rate to be applied to a research project's direct

costs based on the audited real costs for such expenses is a practicable, effective, and efficient approach to supporting these necessary expenditures. The first step in determining F&A charges occurs when each institution negotiates the amount it can be reimbursed for F&A expenses with its respective government auditing agency. The F&A rate is based on what the institution has previously expended for research facilities and operating expenses as determined by and outlined in OMB rules to be necessary and reimbursable costs required to conduct research. The method is standardized across nine categories of expense, each of which must be well-documented and justified in the negotiation process. Once an F&A rate is established, that rate is multiplied against the allowable direct charges in the grant (referred to as the "modified total direct cost" or MTDC) and thus the F&A charge is determined. OMB specifically limits how much universities can be reimbursed for administrative costs.

Some have observed that private foundations treat expenses differently. It is necessary to note that comparing federal F&A reimbursement rates to foundation rates is misleading. Many foundations, such as the Gates Foundation, recognize and allow for certain facilities and/or administrative costs to be charged as *direct* line items on each grant. As James Luther of Duke University presented at the May 24 hearing, the foundation rate may apply to a much larger base than the modified total direct cost noted above. The result is that many of the same costs incur, but with different methods for accounting and paying for them, rather than lower costs paid by foundations. Thus, in their approaches to funding research, both private foundations and the federal government recognize the essential role F&A costs play in conducting high quality and cutting-edge research. It is also important to note that institutions accepting foundation funds accept a cost-share, to strategically advance a specific aspect of the research mission, not the research program overall. Additionally, OMB rules prohibit federal funds from subsidizing research costs of non-federally sponsored research activity.

In facilitating advancements in research, institutions also invest substantially over and above the resources received for sponsored research. A 2015 AAMC study found that on average each medical school invested $111 million dollars or 0.53 cents for every dollar received for sponsored research to support their research programs.[1] All such expenditures serve to make the conduct of science--and the training and provision of new generations of scientists--possible.

The process for F&A reimbursement also supports the government's interest to build and sustain a national infrastructure and capacity for scientific research. U.S. universities and independent research organizations are central to this national interest. This infrastructure would wither if F&A reimbursements are reduced, absent some other major source of public funding. We believe that current policies have been spectacularly successful, reflected in the variety, diversity, and quality of U.S. research institutions. Under this system, research institutions assume the long-term risk of investment in facilities and infrastructure. The research institutions, not the government or taxpayer, must bear the penalty if their facilities are unoccupied with qualified scientists able to successfully compete for research grants.

In summary, F&A expenses are a fundamental and inseparable part of the costs of doing research. A cap, such as the one the administration has proposed for NIH grants, would result in real cuts to high-priority research aimed at finding new cures, improving public health, and growing the economy. Without sufficient federal support for F&A, research institutions would be unable to sustain the scientific infrastructure necessary to conduct this cutting-edge research. Additionally, the notion raised during the hearing of a flat rate -- lower than most current negotiated rates -- would undercut the expenses institutions have incurred and many universities and research institutions would no longer be able to afford to operate extensive research programs, especially as costs rise and alternative funding sources, such as state support, dwindle. A cap or flat rate could well have the unintended long-term consequences of consolidating remaining research programs into fewer institutions by making research

costs prohibitive for smaller and geographically diverse universities and institutions. It could also discourage institutions from pursuing more cutting-edge research requiring specialized facilities.

We are grateful for the Subcommittees' attention and would be happy to answer questions or provide further information.

Sincerely,

Association of American Medical Colleges

Association of American Universities

Council on Governmental Relations

Association of Public and Land-grant Universities

Association of Independent Research Institutes

American Council on Education

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[i] Academic Medicine Investment in Research. Washington, DC: Association of American Medical Colleges. 2015

STATEMENT SUBMITTED BY FULL COMMITTEE RANKING MEMBER
EDDIE BERNICE JOHNSON

OPENING STATEMENT
Ranking Member Eddie Bernice Johnson (D-TX)

Committee on Science, Space & Technology
Subcommittee on Oversight
Subcommittee on Research & Technology
"Examining the Overhead Cost of Research"
May 24, 2017

Thank you to the chairs and ranking members of the Research and Technology and Oversight Subcommittees for holding this hearing on the overhead costs of federally funded research.

The Trump Administration has proposed an 18 percent cut to the National Institutes of Health (NIH), with Secretary Price indicating that those savings can be found entirely by cutting NIH's indirect cost expenditures. The Administration has also proposed an 11 percent cut to the National Science Foundation (NSF). I wouldn't be surprised to hear a similar defense of the NSF cuts. This Administration is assuming they can cut indirect cost reimbursements without doing any harm to our nation's great research universities or to U.S. leadership in science and technology. The evidence simply does not support that assumption.

Both GAO and *Nature* magazine have reported that the reimbursed rates for indirect costs are substantially lower than the negotiated rates – as much as 20 points lower on average. In addition, the data clearly demonstrates universities' willingness to share substantially in the costs of doing cutting-edge science.

Given these facts, it is baffling to me that anyone would assert that universities are profiting from indirect costs. Some of us may be fooled by attention-grabbing talking points about bloated bureaucracies and high negotiated rates, maybe because the system is opaque to us. Some point to international comparisons, highlighting lower indirect cost rates in some other countries. However, without knowing the details for each country, the comparisons of the top lines are meaningless. Likewise, comparisons to philanthropic funding for research are pointless without understanding the details.

Having said that, we can all agree that universities must continue to look for ways to be more efficient, including in their regulatory compliance work. Likewise, Federal agencies must continue to work to streamline their regulations to reduce the unnecessary burden on universities and costs to the taxpayer. And all of us should continue to have discussions about the health and nature of the partnership between the Federal government and the performers of federally funded research, including on policy issues on which we might disagree. But let us be sure that our positions and our arguments are grounded in data based on substantiated and legitimate findings rather than supposition or false equivalencies.

There are always a few bad actors, and oversight remains essential. However, our greatest challenge here is not universities trying to profit from the taxpayers. Our greatest challenge is in achieving transparency about the total costs of doing research and honesty in what is required to maintain U.S. leadership in science and technology. Federally funded scientific research has been a key driver of innovation and economic expansion. We cannot afford to undermine the very institutions that will keep us prosperous into the future.

Before I conclude, I want to comment specifically about public universities. There used to be a cost-sharing compact between state and federal governments for public universities, in which states invested heavily in research facilities to attract more top scientists and federal research dollars. Too many states have been backing away from their end of the deal, and alarms are being raised that student tuition is now being used to subsidize research. This is not sustainable. States must get back to supporting their own institutions. In the meantime, any proposals to cut federal support for indirect costs would do immediate and lasting damage to the research programs at our nation's great public institutions. That would be both a short-term tragedy and a long-term loss for us all.

I thank the witnesses for being here today and I look forward to the testimony and discussion.

I yield back.