Written Testimony of
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Chair Collins, Vice Chair Murray, and Members of the Committee, thank you for the opportunity to testify today. I am Sudip Parikh, chief executive officer of the American Association for the Advancement of Science (AAAS) and the executive publisher of *Science* magazine and the *Science* family of journals. The AAAS mission is to advance science, engineering, and innovation throughout the world for the benefit of all or — simply put — to advance science and serve society.

We live in a world where a child born with cystic fibrosis has every hope of becoming a grandparent — when just a few years ago they might have died in their teens. A world in which a mother with sickle cell anemia has not needed a blood transfusion in more than five years and is able to care for her children without debilitating pain. A world in which the most common type of childhood leukemia has gone from a death sentence to a 90% survival rate. A world where Magic Johnson is still alive more than three decades after being diagnosed with HIV.

These are miracles made possible by a biomedical research ecosystem developed in the United States that is the greatest engine for discovery in service to health that the world has ever known. This ecosystem includes a vibrant biotech and pharmaceutical industry, effective philanthropy, innovative academicians, multiple government funding and regulatory agencies, passionate patient advocates, diverse sources of capital investment, and talent from across the United States and around the world. And it starts here in the halls of Congress where you — each and every one of you — is a champion on behalf of your constituents, who overwhelmingly support biomedical research. Miracles do happen — and the United States has led the way in making them happen for eight decades.

Despite these successes, many tragedies remain — chronic diseases, cancer, drug addiction, suicide, and other maladies take far too many lives and lower our overall life expectancy. One thing I think everyone with whom I speak agrees is that we must ensure our world-leading biomedical research ecosystem addresses all the challenges confronting Americans. Unfortunately, today our leadership is at grave risk.

Let me start by saying that even while producing medical miracles, good jobs, and economic growth, our ecosystem includes inefficiencies as well as opportunities for improvement. It is understandable that the Administration is seeking ways to increase efficiency, optimize structures, and reduce regulatory and administrative burden. As chair of the task force that described a new Vision for American Science & Technology (VAST), I have also voiced these goals.

Unfortunately, the implementation and execution of these efforts have caused both collateral and targeted damage to the biomedical research enterprise and — if rumored proposed budgets for 2026 are realized – will hand leadership of biomedical research to China and, even more devastatingly, dismantle the engine of hope and prosperity for millions of Americans.

This is not theoretical. I have seen first-hand the incredible investment in scientific research made in China — in labs, equipment, and people. Stifel issued a report recently showing that more than 37% of pharmaceutical licensing deals above a certain level involved a Chinese biopharma company. The trend line is going up quickly – it was at zero as recently as 2019. We are rapidly losing our competitive edge, and the dollars we are putting into buying pharmaceuticals will not be reinvested into the American economy. Instead, our drug costs will fund someone else's investment.

Right now, the scientific research community is facing multiple challenges that create a cascading effect on the health and strength of our nation's innovation ecosystem. These challenges are coming from some ill-conceived implementation and execution of otherwise worthy goals to eliminate waste, fraud, and abuse.

- Seemingly indiscriminate reductions in force
- Wholesale immediate cancellations of grants and contracts without clear explanation and understanding of implications
- Cancellation of training support for the next generation of scientists

The stoppage of funding for almost entire institutions like the National Institute for Occupational Safety and Health in West Virginia and Pennsylvania are creating great uncertainty and angst within the scientific enterprise. An arbitrary reduction in contracts funded by the National Institutes of Health (NIH) has resulted in cancellation notices to the principal investigators of the Women's Health Initiative (later rescinded) and the RURAL Cohort Study taking place in Alabama, Mississippi, Louisiana, and Kentucky.

These — and many more examples across the country — are damaging actions being carried out.

Critically, too many game-changing decisions are being made by individuals with little to no understanding of the complex ecosystem and without the benefit of input from Senate-confirmed Presidential appointees. Jay Bhattacharya as NIH Director, Darío Gil as Undersecretary of Energy, Michael Kratsios as Office of Science and Technology Policy Director, Jared Isaacman as NASA Administrator, and Susan Monarez as Centers for Disease Control and Prevention Director are among the expert leaders who have either not yet or just recently been confirmed. Their expertise, vision, and understanding of the scientific enterprise have not been inserted into these extraordinary decisions.

You have seen the effects in your own states and on high-priority programs. You've been following it because you care about patients, their families, and about the biomedical research that gives them hope for treatments and cures. Every member of this Committee has been a champion of biomedical research across the federal government — from National Laboratories in the Department of Energy, to the critical research at the Department of Veterans Affairs in support of those who have served our country, to the physical sciences underpinning biomedical research at the National Science Foundation and the National Institute of Standards and Technology. I have watched you lead – the miracles and economic growth I noted at the

beginning of my statement would not have been possible without your leadership. Our federal support of biomedical research is an investment in our nation's health, prosperity, and security.

Several near-term challenges could weaken the foundation of what has made our biomedical research and innovation system the envy of the world. The basic pillars necessary to propel the U.S. research enterprise to push the boundaries of scientific discovery, prepare the science, technology, engineering, mathematics, and medicine (STEMM) workforce, and advance S&T knowledge into therapies, tools, and commercial products include people, investments, and infrastructure, as well as the policy environment that makes or breaks them.

1) **The possibility of impoundment or rescission of FY 2025 funds:** Over the past three months the rate of obligation of funds appropriated to the NIH, NSF, and other science agencies has slowed dramatically. This slowing is not from a lack of health improving opportunities, scientific ideas or grant proposals, but rather due to the near paralysis in the structures built to review and process those proposals. Federal research grants and contracts are being cancelled, and entire efforts are being shut down; merit-review panels are constrained in determining which research proposals deserve awards; and the prospect of impoundment of the final fiscal year (FY) 2025 funding looms. It is vital that federal research agencies fully obligate the final FY 2025 appropriations as Congress intended, but we have not yet seen spend plans from the administration.

2) **The possibility of catastrophic cuts to FY2026 funding:** In the coming weeks, the President will introduce his budget request for FY 2026. Several leaked documents reportedly indicate that the request may propose cutting the NIH budget by 20% to 44%. I hope this is wrong, but this level of funding would mean fewer treatments for cancers, slower progress toward our understanding of Alzheimer's and dementia, and diminished resources for fighting the opioid crisis, threatening the health and livelihoods of Americans in every town, every region, and every state across the United States. Let us be clear. Cuts this drastic would mean the loss of America's global leadership in biomedical research for a generation or more.

3) **Haphazard changes to organizational structures:** Congress has a critical role to play in any reorganization of the NIH. I applaud the transparent, inclusive, and deliberative process led by Senator Cassidy to consider plans for NIH optimization. I am further encouraged by recent remarks made by Director Bhattacharya, noting that he would seek a lot of advice when it comes to the NIH budget and reorganization. That advice should come from all sectors and include individuals with requisite expertise in science and the scientific process, as well as expertise of the NIH and its relationship with academic and industrial sectors, and more importantly the patients that benefit from that research. The leadership of NIH should be able to propose a vision, work with Congress, and engage with the research and patient communities to optimize its structure. We need that conversation.

4) **A 15% cap on institutional Facilities and Administrative (F&A) expenses at some federal agencies:** I will not suggest that our current system is perfect or even good, but an arbitrary blanket cap is not the way to fix the system. In fact, a cap this low this quickly would dramatically damage institutions in every state. Scientific research funding, including F&A expense reimbursement, is a partnership between the federal government and institutions to support the capacity to do research. This partnership in every state has built the infrastructure to do world-class science, but it has also grown in regulatory complexity to the point it is creaking from its own weight. The AAAS does not have a formal position on F&A, but I appreciate Congress' recognition that the research community should develop new models that are simpler, more transparent, and more easily determined to be fair. The research community stands ready to have that conversation.

Investments in science, facilities, and equipment cannot advance discovery alone. We need people, including scientists, technicians, engineers, and clinical trial participants. The majority are not PhDs or MDs. We need the passion, curiosity, and risk-taking that scientists and others bring to the lab and the classroom to explore and advance scientific knowledge. We need their hard work, dedication, and their connection to the communities in which they live. One example of many I could give comes from the National Science Foundation (NSF) where the number of NSF Graduate Research Fellowships has been cut by over 50%. These are the highest potential students from all over our nation. They are in every field in the physical and life sciences. From anywhere in the country, these fellowships enable our early-career scientists to go as far as their talent and drive can take them. Many go on to become scientific leaders in the biomedical research ecosystem and beyond.

With these reductions, we are sending a message to the next generation of early-career scientists and engineers that the future of the U.S. research enterprise is not just in question – it is bleak. In fact, I have spoken with undergraduate, graduate, and post-doctoral researchers who are worried about whether they should even continue their scientific pursuits or switch careers. And mid-career and senior scientists are also questioning their role in contributing to the U.S. research enterprise.

We have given a green light to our allies and competitors alike to take advantage of this opportunity to lure the brilliant minds here in the U.S. to bring their expertise to their higher-education institutions and research labs, and to generate their innovations. We are already seeing countries like France, Ireland, Denmark, Canada, Australia, and China increase recruitment efforts to attract U.S.-based scientists. The United States is not the only source of innovation. Make no mistake: if an effective treatment for Alzheimer's disease comes from Birmingham, Alabama, or Beijing, Americans will be thankful to use it and applaud those who contributed to it — but as an American, I want the benefits of that discovery and development to accrue to the United States. We need to ask ourselves, is the next "golden era" of biomedical research going to be in the U.S.? Or is it going to be in China, Europe, or elsewhere? Who will make the discoveries and who will set the standards governing how science is conducted?

I have come here to discuss these challenges because I am determined to find common ground about how we can protect and strengthen the U.S. scientific enterprise, which has been a gold standard globally for nearly a century. In the past few months, I have visited labs across America — from California to Kansas, Missouri to North Carolina, Tennessee to New Jersey. Everywhere scientists are gravely concerned but remain dedicated to what science can accomplish. They are working toward the needs of their communities, our country, and the world. Scientists in academia and industry, patient advocates, and research institutions are coming together to solve problems and are looking to Congress, the Administration, and Senate-confirmed agency leaders to share a vision and support for continued American leadership in biomedical research. We want to work together for more miracles, for better overall health, and for a more prosperous America.

But we must be the protagonists of our own story. Each and every one of you has a role to play to decide the funding and policy priorities that will define our nation's trajectory as an innovation leader. The challenges I have identified are urgent and need your attention now. The enterprise, which has benefited our society for decades, is resilient, but there is a breaking point — and we are close to reaching it. If we allow it to break, we cannot simply put it back together again next year. It took generations to build it, and it will take generations to rebuild it. I am optimistic we can find a way forward together.

Thank you.