DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH

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Modernizing the National Institutes of Health: Faster Discoveries, More Cures

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Chairman Cassidy, Ranking Member Sanders, and Distinguished Members of the Committee,

Thank you for the opportunity to testify today on the modernization of the National Institutes of Health (NIH). NIH is the world's premier biomedical research institution. Our mission is to seek fundamental knowledge about the nature and behavior of living systems and to apply that knowledge to enhance health, lengthen life, and reduce illness and disability. Achieving our mission depends on the confidence of the American people. As stewards of taxpayer resources, NIH is entrusted to support cutting-edge research that will improve the health and well-being of all people. That public trust is embodied in everything we do and every decision we make at NIH.

This hearing comes at an opportune time, as the promise of biomedical research has never been more inspiring. With that said, it is critical we take a hard look at NIH's structures, policies, and operations to ensure they are optimized to deliver. At the same time, we must look forward to a future of strengthened public trust and strategic positioning that allows NIH to meet emerging public health challenges.

Building and sustaining public trust requires not only transparency and accountability, but also demonstration that NIH supported research delivers meaningful, real-world benefits. In 2025, NIH investments continued to demonstrate how modernized, data driven, and human relevant science can translate into improved health outcomes. NIH funded investigators achieved a historic milestone by successfully delivering a personalized gene editing therapy to an infant with a rare, previously incurable disease, an advance made possible by long term federal investment in translational infrastructure. NIH research also generated new insights into Alzheimer's disease, including evidence linking herpes zoster vaccination to reduced dementia risk, showing the power of population level data to inform prevention strategies. These examples emphasize how NIH's modernization of its scientific approach and embrace of innovative technologies can strengthen public trust by delivering relevant and responsive research.

NIH has long viewed modernization as one way to maintain momentum with evolving scientific standards and public expectations. In that context, Senator Cassidy's white paper represents a good-faith contribution to this discussion. It reflects a broader bipartisan interest of ensuring NIH remains effective, accountable, and worthy of public confidence. Congressional oversight and engagement have been integral to NIH's success for decades, and we view this two-way dialogue as part of a shared commitment to strengthening the agency.

Strategic Adaptation

To understand the importance of modernization at NIH, it is essential to recognize the breadth and complexity of the ecosystem it supports. NIH is the largest public funder of biomedical research in the world, supporting more than 300,000 researchers in more than 2,500 research institutions across the country. It comprises 27 Institutes and Centers with complementary scientific missions charged with identifying the most promising science to improve the health of the Nation

The complexity of the organization is a feature, not a bug. Human biology and disease is far more complex and correspondingly requires a multi-faceted and strategic approach to understanding it. NIH recognizes, however, that adaptable structures are necessary to ensure coordination, reduce unnecessary duplication, and enable NIH to respond efficiently to cross-cutting challenges and opportunities. NIH is amenable to change because science itself evolves. Structures that were effective for advancing biomedical research in previous decades may not always be well-suited to today's research environment.

For example, the NIH started off as a one-room "hygienic laboratory", part of the Marine Hospital Service in the late 1800s. Over time, it was renamed the NIH, and during World War II, with national recognition of the value of science to the nation, grant-funding took off. Institutes were added over time. Over time, experience has shown that NIH can and must periodically adapt its organizational and operational frameworks to support high-quality science.

The pace of scientific change today underscores this reality. Americans across the country have real time access to information about their health and are increasingly empowered to share it in novel ways through advances in the way we collect and share information. Artificial intelligence is increasingly integrated into aspects of scientific discovery to capitalize on the troves of data being generated every day. Simultaneously, we've never known more about biological systems, and ever more sophisticated research techniques and capabilities are enabling researchers to ask more complex questions and propel science forward at greater speeds and scale than ever before. Modern biomedical science increasingly relies on research collaborations and interdisciplinary teams that span institutions and disciplines. These approaches challenge traditional models and demand greater alignment across NIH's Institutes and Centers. Just as the science evolves, so too must the supporting policies, infrastructure, and leadership structures.

Reform Efforts Underway

Modernization at NIH is not theoretical or aspirational, but concrete and measured in steps we are already taking. Efforts are already underway and are intended to ensure that NIH can continue to manage its expansive portfolio responsibly, support cutting-edge science, and maintain the confidence of Congress and the public. NIH is moving deliberately to strengthen coordination, clarify leadership roles, and enhance accountability across the agency. These reforms are designed to ensure that NIH's structures are responsive to the needs of the biomedical landscape in the U.S. and aligned with its mission.

Initial efforts have been focused on identifying areas in which reorganization could gain new operational efficiencies. For example, in March 2025, NIH announced the centralization of peer review for grants, cooperative agreements, and research and development contracts within the NIH Center for Scientific Review, consolidating review activities previously conducted across NIH Institutes and Centers to improve efficiency and consistency. While only recently implemented, the approach is expected to save more than $65 million annually by eliminating duplicative efforts across the agency. Similarly, NIH is actively working on centralizing redundant functions such as communications, acquisitions, and committee management. NIH is also implementing a unified funding strategy to promote clearer, more consistent award decisions across its extramural funding portfolio. This initiative is intended to enhance transparency, reduce variability in funding practices, and ensure that research investments are aligned with NIH-wide priorities. By providing clearer guidance and a more consistent framework for funding decisions, the unified strategy supports both scientific excellence and responsible stewardship of taxpayer dollars.

I also recognized the need to strengthen oversight, performance management, and accountability across NIH's research portfolio. For example, standard metrics for evaluating the success of a researcher, such as the number of publications, does not correlate with improved health. Ensuring that NIH-funded research results in Americans living longer, healthier lives is an overarching priority of mine.

Importantly, our modernization efforts are geared towards making the scientific enterprise more effective in delivering on the promise of human health. Toward that end, we are working to identify roadblocks to achieving this goal and developing solutions to overcome them. For instance, scientists have long recognized the need for better research models of disease, human-based models, and other new approach methodologies (NAMs) that can serve as novel, patient-derived sources complementing basic models. However, wide-spread adoption of these newer approaches requires robust standards, validation methods, and repositories for data and resource sharing. To catalyze this effort, NIH is

establishing new infrastructure within NIH that will support the integration of emerging technologies to enhance human relevance and translatability, while complementing and, where appropriate, reducing reliance on traditional animal models. This is just one new scientific effort NIH is launching to ensure the scientific community has access to the resources it needs to continue our leadership in innovation.

More broadly, these reforms build on a substantial body of policy initiatives launched under my leadership. Since becoming NIH Director, I have introduced numerous policies that reflect a commitment to strengthening rigor, accountability, transparency, and efficiency across the research landscape. These policy initiatives demonstrate that modernization at NIH is not a single action, but an ongoing process informed by evidence, experience, and engagement with partners. These reform efforts also represent a deliberate and coordinated approach to modernizing NIH's governance and operations.

Upcoming Reform Priorities

In addition to the reforms already underway, NIH continues to pursue a set of ongoing and forward-looking priorities that are central to modernization and responsible stewardship of public resources.

NIH is strengthening efforts to improve reproducibility and rigor through a renewed emphasis on replication. Building on prior initiatives addressing rigor and transparency, NIH is expanding support for independent replication and validation of key research findings. This work is critical to maintaining confidence in the scientific evidence base and to ensuring that research results can be reliably translated into clinical and public health applications. Strengthening replication efforts reflects NIH's commitment to continuous improvement in research quality and to learning from past experiences.

Modernizing data infrastructure is another central priority. NIH is advancing efforts to strengthen real-world data capabilities as part of a broader strategy to support more timely, efficient, and representative biomedical research. By improving access to and integration of real-world data sources (such as electronic health records, claims data, and other health-related datasets) while ensuring patient privacy, NIH aims to complement traditional research approaches and accelerate the generation of actionable evidence. These efforts also require careful attention to data governance and privacy protections that are integral to maintaining public trust.

Together, these priorities reflect NIH's understanding that modernization is an ongoing, iterative process rather than a single event. Strengthening replication and building modern

data infrastructure are all essential to ensuring that NIH remains a responsible steward of public funds and a leader in high-quality biomedical research.

Conclusion

Modernization is fundamentally about strengthening NIH's capacity to manage a large and complex research enterprise, steward taxpayer dollars responsibly, and keep pace with a rapidly evolving scientific landscape. The reforms underway and the priorities ahead reflect NIH's ongoing commitment to transparency, scientific rigor, and continuous improvement.

Congress is an essential partner in this effort. NIH looks forward to continued collaboration with Congress to ensure the agency remains accountable, effective, and responsive to the needs of the American people, while sustaining its role as an innovator and catalyst to improved health outcomes for all.

Thank you for the opportunity to testify.