

BIOMEDICAL RESEARCH

INTRODUCTION

A half century of investment by the United States Federal Government in biomedical research has dramatically advanced the health and improved the lives of the American people. Funding for the National Institutes of Health (NIH) specifically has had a significant impact on the United States' global preeminence and development of a biomedical research enterprise that is unrivaled throughout the world. Biomedical research entails understanding how the body works and investigating how to enhance health and reduce disease. A vital field of study for understanding human health is endocrinology, which involves the investigation of hormones and the role they play in the body's daily function. This includes research to help us understand how changes in hormones contribute to disease. Basic and clinical endocrine scientists funded by NIH conduct research that leads to the development of treatments for endocrine disorders and diseases including diabetes, some cancers, obesity, thyroid disorders, bone health, and infertility. These conditions affect millions of people in the United States and create a significant health and economic burden on society. The development and discovery of treatments for diabetes, obesity, cancer, cardiovascular disease, and others are available today, thanks to NIH funding.

BACKGROUND

The NIH is comprised of 27 institutes and centers and annually invests more than \$35 billion in extramural research funded throughout the country.¹ More than 80% of the NIH's funding is awarded through over 55,000 competitive grants to more than 300,000 researchers at over 2,500 universities, medical schools, and other research institutions around the United States and throughout the world.² There is no single NIH institute focused on endocrine research. Instead, clinical and basic endocrine-related research and centers such as the National Institute of Diabetes and Digestive and

Kidney Disease (NIDDK), *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, National Heart, Lung, and Blood Institute, National Cancer Institute, and National Institute of Environmental Health Sciences.

Federally funded biomedical research is supported primarily through annual appropriations to the NIH and provides opportunities to conduct foundational and translational research that is not performed in the private sector or other government agencies. NIH-supported discoveries help inform research and development (R&D) for private sector companies. Congress has historically shown bipartisan support for biomedical research by increasing the NIH budget. From 1998 to 2003, Congress committed to double the budget of the NIH from \$13.6 billion to \$27.3 billion. However, this was followed by a period of stagnant growth for the agency. Then, from FY 2016–FY 2026, the NIH saw funding increases each year with bipartisan support, with the FY 2026 budget reaching \$48.7 billion.³ Despite this support, NIH funding has not kept pace with inflation as the FY 2026 appropriated funding level for NIH has not achieved considerable growth in real terms relative to Fiscal Year (FY) 2003 funding levels. Biomedical research should be protected and funded at the highest possible dollar amount to support continued growth. Without appropriated funding that accounts for inflation and confidence that funds will be spent as intended, the opportunities to discover life-changing cures and treatments will drastically decrease. The funding uncertainty also threatens the future research workforce by causing some graduate programs at United States institutions to reduce admissions for future academic years.⁴ This will create gaps in the biomedical research pipeline and long-term impacts on public health sectors that will threaten Americans' health and well-being and will prevent the United States from maintaining its global research leadership and economic competitiveness.

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¹2025 Update: NIH's Role in Sustaining the U.S. Economy. United for Medical Research. <https://unitedformedicalresearch.org/annual-economic-report/>. Updated in 2025. Accessed March 14, 2025.

²Overview of FY 2023 Executive Summary. Office of Budget, National Institutes of Health. <https://officeofbudget.od.nih.gov/pdfs/FY23/br/Overview%20of%20FY%202023%20Executive%20Summary.pdf>. Updated in 2022. Accessed March 8, 2023

³National Institutes of Health (NIH) Funding: FY 1996-FY 2025. Congressional Research Service. <https://www.congress.gov/crs-product/R43341> Accessed March 9, 2026.

⁴Thompson, C., Hollingsworth, H., & Seminera, M. Funding cuts to NIH research grants impact graduate school admissions. AP News. <https://apnews.com/young-scientists-see-career-pathways-vanish-as-schools-adapt-to-federal-funding-cuts-000001959e23d0e3addfd3fa7cc0000>. Published March 16, 2025. Accessed March 18, 2025.



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CONSIDERATIONS

Congress has historically supported NIH through the appropriations process and provided high-level guidance on operations and prioritization. However, in recent years, disruptions in grant review and administration have threatened the ability of NIH to effectively support the national medical research enterprise. While NIH has received funding increases in recent years, these increases have struggled to keep pace with inflation. For example, the NIH's FY 2022 purchasing power was only 0.6% greater than the FY 2003 level.³ As a result, the NIH budget cannot sufficiently fund many of the highly meritorious research grants received from investigators and scored highly during peer review. Additionally, proposals from the administration to restructure NIH without adequate input from scientists and other stakeholders threaten to disrupt entire lines of investigation and research programs, including critical national priorities such as women's health research and obesity.

Threats to NIH operations and structure endanger medical research

Multi-year awards provide funding upfront for a long-term project in one fiscal year instead of providing annual disbursements spread across the length of a project (often up to 5 years). While NIH has used multi-year funding in some instances where appropriate, the administration has recently attempted to impose policies forcing all awards to use multi-year funding. This decreases the ability to spread the total award over multiple years, leading to fewer awards being issued in the current year. With the inability to support more investigators, a blanket multi-year funding proposal limits flexibility for the agency over the course of the fiscal year and disproportionately disadvantages trainees and early career scientists seeking their first NIH awards.

The Endocrine Society is also concerned about proposals to restructure NIH without a formal authorizing process, including hearings, from Congress. Agencies across US Department of Health and Human Services (HHS), including NIH, are being asked to develop plans to restructure their offices and personnel, develop entirely new organizational charts, and merge offices without input from Congress or the broader medical research community. Such restructuring proposals collapse entire strategic priorities into new institutes and centers without describing how these research areas would be preserved in the new structure. Any change to an agency like NIH, which provides funding to all 50 states and supports complex long-term research priorities, should involve forums for stakeholder input, including but not limited to scientists, patients, institutions, and civil society groups. Congress should ensure that changes to the NIH organization and structure have a scientific and policy rationale through the authorization process.

In addition, there are new layers of political review that have been added to NIH operations that have delayed decisions ranging from notices of funding opportunities to grant review. It is critical that funding for the NIH is used as Congress has intended.

Impact on the national, regional, and local economy

Funding for biomedical research fuels the local, regional, and national economy. Based on a 2025 analysis, for every \$1 invested in NIH funding, there is a \$2.56 return on investment. This means that the \$35.3 billion awarded to NIH scientists in FY 2025 leads to \$90.62 billion in economic activity.¹ NIH funding supports basic, translational, and clinical science, ensuring that the discoveries made in the laboratory translate to treatment options for patients suffering from debilitating and life-threatening diseases. Advances in treatment also reduce the healthcare costs of our nation. As the population of the United States ages, the incidence of costly, chronic conditions such as diabetes, obesity, cardiovascular disease, and cancer, will significantly increase. To save the country billions in healthcare costs, additional investment in biomedical research will be needed. Studies on the effectiveness of investing in research have identified significant savings on health care: for instance, treatments that delay or prevent diabetic retinopathy save the country \$1.6 billion a year,⁵ and prevention programs that reduce the risk of developing type 2 diabetes can result in a net savings to Medicare of \$2 billion over 10 years.⁶

Without the release of appropriated biomedical research funding and an increase in funding for NIH for FY 2027, the United States economy will be significantly impacted. In addition to the impact that research has on the country's health care spending, research funding also has a positive impact on local economies by supporting over 400,000 jobs. In Alabama, \$380 million in NIH grant and contract funding directly supported over 4,000 jobs and spurred \$916 million in economic activity.⁷ In Los Angeles, each dollar of taxpayer investment received by the University of California, Los Angeles, generates \$21 in economic activity, resulting in a \$16.6 billion impact on the region.⁸ The jobs created by federal dollars directly impact those conducting research, and also support staff who operate "core" research facilities that provide specialized resources for numerous labs, administer grant submissions and compliance at universities, and many others that directly or indirectly support the research enterprise. Without federal research

¹Medical Research: Saving Lives, Reducing the Cost of Health Care, Powering the Economy. Research!America. <http://www.researchamerica.org/sites/default/files/uploads/EconomicFactSheet.pdf>. Created November 9, 2012. Accessed May 11, 2017.

⁵Thorpe, K. and Z. Yang. Enrolling People with Prediabetes Ages 60-64 in a Proven Weight Loss Program Could Save Medicare \$7 billion or More. Health Affairs. September 2011.

⁷NIH Funding at Work in Alabama. United for Medical Research. <https://www.unitedformedicalresearch.org/nih-pdf/?state-id=498>. Updated March 10, 2025. Accessed March 18, 2025.

⁸Systemwide Economic, Fiscal, and Social Impact Analysis. The University of California. <https://universityofcalifornia.edu/sites/default/files/economic-impact-report-2021.pdf>. Updated January 2021. Accessed March 8, 2023.



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investment, the revenue injected into local and regional economies would be lost. Not only does this significantly impact individuals directly involved in research, but it also affects industries that depend on downstream revenue.

Global competitiveness and leadership in science and the economy

Bolstering research funding is imperative for the success of the United States biomedical research enterprise and leadership in the global economy. United States R&D expenditures relative to the global share of R&D have declined over nineteen years from 37.1% in 2000 to 27.3% in 2019.⁹ Should the amount of federal research funding remain flat or begin to decline, so do the opportunities for the United States to maintain its leadership and competitiveness in R&D globally. A decline in funding can translate to a depletion of America's pool of scientific talent, thereby reducing the United States' ability to drive discoveries and innovation in all sectors of the economy.

A 2024 survey conducted by Research!America revealed that public sentiment supports federal funding of research, as 73% of Americans feel it is very important for the United States to be a leader in medical and health research.¹⁰ In 2020, 61% Americans say current spending on research to prevent, cure, and treat disease is not enough.¹¹ In fact, in the 2023 survey, 63% of Americans say they are willing to pay more in taxes in support of health research.¹² These survey data highlight the need for policymakers to prioritize investments in research to maintain the country's global leadership.

Increased longevity and improved quality of life

Federally funded endocrine-related research has resulted in significant advances in the prevention and treatment of some of the nation's most prevalent diseases at a fraction of what it would cost to manage these conditions. For instance, NIH-funded studies have found that in postmenopausal women, one of the best predictors of fracture is bone mineral density of the hip. This finding resulted in a better method for identifying those at risk for osteoporosis, which in turn prevents expensive and debilitating fractures that cost \$17 billion annually in direct care.¹³ Another impact of NIH research is focused on the management of type 1 diabetes (T1D), which affects 1.6 million adults in the United States. People with T1D cannot make insulin and must rely

on external sources of insulin to survive. Monitoring insulin levels and when and how much to dose can be complicated for users, particularly children. To address this, NIDDK-supported researchers developed a device known as a "bionic pancreas", which uses next-generation technology to automatically deliver insulin to those with T1D.¹⁴ Not only is the bionic pancreas more effective at maintaining blood glucose levels, it is also easier to use and leads to improved quality of life. This was made possible not only through funding of this project, but also through sizable investments in basic research in the decades prior to establishing the mechanism of how T1D leads to dysregulation of blood glucose levels. Additionally, studies conducted by the NIH have found that with intensive lifestyle intervention, a patient's risk of getting type 2 diabetes can be reduced by 58%, and that the drug metformin can reduce the development of diabetes by 31%.¹⁵ These interventions improve quality of life for those living with diabetes and reduce associated health care costs. Diabetes affects 11% of the entire United States population, and \$1 out of every \$4 in United States health care costs is spent on care for people with diabetes.¹⁶ However, if funding levels for biomedical research do not keep pace with inflation, breakthroughs in medical care to address this need will never be realized.

POSITIONS

The Endocrine Society is deeply concerned about the future of biomedical research in the United States without sustained support from the federal government. We are also concerned about changes that are delaying, hampering, or canceling funding, preventing the agency from deploying these funds as Congress intended for them to be used.

The Endocrine Society strongly supports increased federal funding for biomedical research to provide the additional resources needed to enable scientists to address the burgeoning scientific opportunities, support the next generation of the research workforce, improve current therapeutics, discover novel treatments, find cures for diseases, and maintain the country's status as the preeminent research enterprise.

The Endocrine Society recommends that the National Institutes of Health receive funding of at least \$51.303 billion in FY 2027.

⁹The State of U.S. Science and Engineering 2022. U.S. and Global Research and Development. Science & Engineering Indicators, NSF. <https://nces.nsf.gov/pubs/nsb20221/u-s-and-global-research-and-development>. Updated January 2022. Accessed March 28, 2024.

¹⁰January National Survey. Research!America. <https://www.researchamerica.org/wp-content/uploads/2024/02/January-2024-National-Survey-Release.pdf>. Updated in February 2024. Accessed March 28, 2024.

¹¹America Speaks! Poll Data Summary, Research! America. https://www.researchamerica.org/wp-content/uploads/2022/09/PollDataSummary_vol20.pdf. Updated in 2020. Accessed March 8, 2023.

¹²America Speaks! Poll Data Summary, Research! America. <https://www.researchamerica.org/wp-content/uploads/2023/05/America-Speaks-Poll-Data-Summary-Volume-23.pdf> Updated in 2023. Accessed March 28, 2024.

¹³Tran O, Silverman S, Xu X, Bonafede M, Fox K, McDermott M, Gandra S. Long-term direct and indirect economic burden associated with osteoporotic fracture in US postmenopausal women. *Osteoporos Int.* 2021 Jun;32(6):1195-1205. doi: 10.1007/s00198-020-05769-3. Epub 2021 Jan 7. Erratum in: *Osteoporos Int.* 2022 Aug;33(8):1835. PMID: 33411007; PMCID: PMC8128807.

¹⁴Bionic Pancreas Simplifies Management of Type 1 Diabetes. NIH Research Matters, National Institutes of Health. <https://www.nih.gov/news-events/nih-research-matters/bionic-pancreas-simplifies-management-type-1-diabetes>. Updated October 18, 2022. Accessed March 10, 2023.

¹⁵About the National DPP. National Diabetes Prevention Program, Centers for Disease Control and Prevention. <https://www.cdc.gov/diabetes/prevention/about.htm>. Updated on December 27, 2022. Accessed March 8, 2023.

¹⁶American Diabetes Association. Economic costs of diabetes in the US in 2017. *Diabetes Care.* 2018;41(5):917-928.



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Congress should exercise its oversight authority to include language to protect NIH funding such that the proportion of multi-year grant awards for FY 2027 is not increased when compared to the proportion awarded in FY 2026, unless NIH awards the same total number of grants in FY 2027.

Congress should exercise its oversight authority to ensure funding is being spent as it intended—notices of awards are released, researchers are able to draw down on awards, and success rates are not reduced.

The Endocrine Society recommends funding for the Advanced Research Projects Agency for Health (ARPA-H) be separate from NIH base funding.

The Endocrine Society endorses the funding recommendations from the Federation of American Societies for Experimental Biology (FASEB) for other agencies that support biomedical research.

Any plans for the restructuring of NIH should be conducted with input from stakeholders, including but not limited to NIH leadership, scientific experts, patients, and scientific societies, and with input from authorizing committees through a formal, bicameral authorization process.