

NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES



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Dr. Rodgers has been Director of NIDDK since 2007 and had served as Deputy Director since 2001. As a leading hematology investigator, he is widely recognized for his contributions to development of the first effective—and FDA-approved—therapy for sickle cell anemia.



Introduction to NIDDK Research

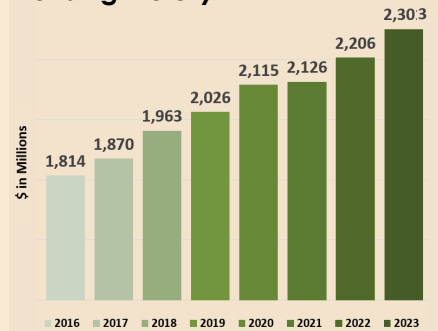
Established in 1950, NIDDK supports and conducts research on some of the most chronic, common, and costly conditions, including diabetes and other endocrine and metabolic diseases, liver and other digestive diseases, obesity, kidney diseases, urologic diseases, and hematologic (blood) diseases. The Diabetes, Endocrinology, and Metabolic Diseases program; the Digestive Diseases and Nutrition program; the Kidney, Urologic, and Hematologic Diseases program; and the NIDDK Intramural Research Program support basic, clinical, and translational research across the United States. NIDDK also supports research training and career development, as well as outreach efforts to patients, healthcare providers, and the public.

NIDDK Efforts to Address Health Disparities and Promote Health Equity

Many of the diseases in NIDDK’s mission place disparate burdens on racial and ethnic minority groups, rural populations, and people with lower incomes. Examples of NIDDK’s efforts to eliminate health disparities and advance health equity include:

- A Working Group of NIDDK’s Advisory Council that is developing a Health Disparities and Health Equity Research Implementation Plan to identify specific research needs and opportunities.
- Stakeholder Engagement Innovation Centers for type 1 and type 2 diabetes to promote engagement of communities and individuals who experience diabetes-related health disparities.
- Clinical trials that aim to improve diabetes technology usage in individuals with type 1 diabetes from racial and ethnic underrepresented backgrounds.
- A new phase of the Inflammatory Bowel Disease (IBD) Genetics Consortium that is recruiting more participants from minority populations, providing a clearer picture of how genetics intersect with IBD risk across all populations.
- Researchers who developed a potential new way to diagnose kidney disease that eliminates race as a variable, an important step toward eliminating health disparities in estimating kidney function.
- A new consortium that will test community-engaged interventions to dismantle or mitigate the effects of structural racism in the care and outcomes of people living with kidney disease.
- Continued efforts to foster a diverse biomedical workforce through research training and career development programs. For example, Helping to Accelerate Research Potential (HARP) aims to provide opportunities and mentorship for current NIDDK grantees, especially postdoctoral scholars and junior faculty from diverse backgrounds.

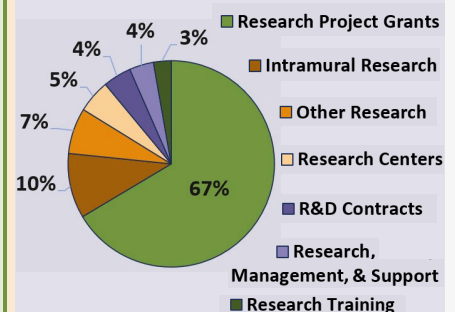
Funding History*



FY 2024 President’s Budget Request (in millions): \$2,303

*excludes mandatory T1D funding

FY 2022 Funding Support



Selected Current Activities

- NIDDK is supporting the Rare and Atypical Diabetes Network that could yield insight not only into rare forms of diabetes, but also into the heterogeneity of type 2 diabetes.
- The Human Pancreas Analysis Program is analyzing pancreata from people with and without diabetes at various stages of disease progression, making the data available to the research community, and providing knowledge to inform new strategies to reverse or prevent disease.
- The Physiology of the Weight Reduced State Clinical Trial Consortium is gaining insights into the causes of individual variability in maintenance of reduced weight over time.
- The Liver Cirrhosis Network is conducting research toward transforming clinical care for liver cirrhosis by identifying potentially effective treatment options beyond liver transplantation.
- The Hemodialysis Opioid Prescription Effort Consortium is developing interventions to reduce opioid use in people on hemodialysis.

NIDDK Recent Advances and Emerging Opportunities



NIDDK Recent Advances and Emerging Opportunities is an annual compendium that highlights recent advances from NIDDK-supported studies, along with personal stories of people who have given time and effort to participate in NIDDK-sponsored clinical research.

niddk.nih.gov/about-niddk/strategic-plans-reports

NIDDK at a Glance



Number of FTE Employees:
651

4-year average,
FYs 2019–2022

2022 Research Project Grants*

Funded Principal

Investigators:

828

Competing

Applications

Awarded:

641



*excludes mandatory T1D funding

2022 Paylines and Early Stage Investigators (ESIs*)

RO1 Payline: **16%**

ESI Payline: **25%**

ESI Renewal Payline: **19%**

Number of ESIs: **102**



*excludes new investigators who are not ESIs

Selected Recent Accomplishments

- A preliminary clinical study found that the oral medication verapamil may help preserve pancreatic insulin-producing beta cell health in people newly diagnosed with type 1 diabetes.
- Researchers have discovered that a molecule produced during exercise by various mammals, including people, can reduce food consumption and obesity in mice.
- Studies provided valuable insights into the gut microbiome, including how different types of fiber have specific effects on the microbiome and human health, and how the microbiome could keep the gut's immune system in check to prevent inflammation.
- A recent study showed that an intervention that teaches first-time parents how to interact constructively with their infant can be an important and effective childhood obesity prevention strategy for second-born siblings as well.
- A study in mice showed that kidney damage caused by autosomal dominant polycystic kidney disease can largely be reversed by activating the normal version of a faulty gene.

Selected Future Research Initiatives

- New clinical studies will aim to understand the increasing rates of new-onset diabetes in adults and children following SARS-CoV-2 infection.
- Research will characterize interactions between different pancreatic functions, shedding new light on type 1 diabetes progression and potential innovative approaches for therapy.
- Studies will focus on identifying genes and their variants that play a role in IBD and understanding how they influence disease, so potential treatments can be developed.
- A clinical study in children with Crohn's disease will aim to link pre-treatment characteristics and the ability to achieve complete healing after one year of anti-TNF therapy.
- The next phase of the George M. O'Brien Kidney Centers will create innovation hubs to develop new and improved resources to advance kidney research.

Recent NIDDK Research Highlights

- Type 2 diabetes medications made possible by NIDDK research provided cardiovascular health benefits in people with diabetes, and one of these drugs was also recently approved as a treatment for obesity.
- Important findings are shedding new light on prevention and therapeutic strategies for diabetic foot ulcers and set the stage for further clinical studies.
- Recent studies on inflammatory bowel disease have dug deeper into the genetics of the disease in diverse populations, offering potential pathways to better diagnosis and treatment.
- A treatment for Alagille syndrome, a pediatric liver disease, was recently approved by the FDA based in a large part on research by NIDDK's Childhood Liver Disease Research Network.
- Researchers found that people with kidney stones have a lower chance of relapse after stone removal when smaller, asymptomatic stones are removed during the surgery as well.