

NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES

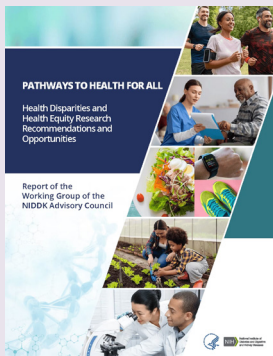


Introduction to NIDDK Research

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.

Pathways to Health for All: Health Disparities & Health Equity Research Recommendations & Opportunities

Released in May 2023, a new report from the Health Disparities and Health Equity Research Working Group of the NIDDK Advisory Council makes innovative recommendations to advance NIDDK’s health equity and health disparities research programs. It also includes guiding principles for embedding equity into research and tips for researchers, at NIDDK and externally, who plan to engage in robust health equity research.



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Griffin P. Rodgers, M.D., M.A.C.P.

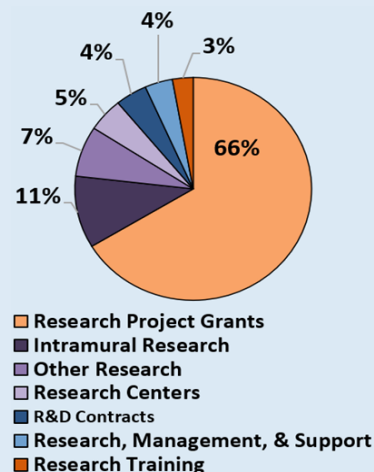
Dr. Rodgers has been Director of NIDDK since 2007 and served as Deputy Director since 2001. As a leading hematology investigator, he is widely recognized for his contributions to the development of the first effective—and FDA-approved—therapy for sickle cell anemia.



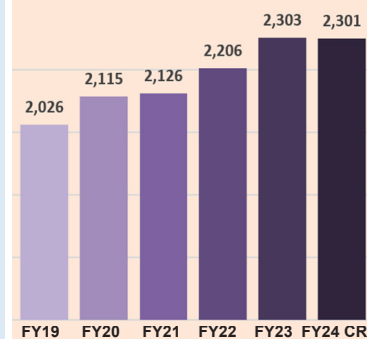
Recent NIDDK Research Highlights

- Decades of NIDDK-supported research led to FDA approval of the first drug that delays clinical type 1 diabetes onset in individuals at high risk for developing the disease and the first cellular therapy for some adults with type 1 diabetes.
- NIDDK foundational research made possible the first FDA-approved oral medication for type 2 diabetes in children 10 years and older, expanding treatment options for pediatric type 2 diabetes.
- The Kidney Precision Medicine Project created a new “kidney atlas” that compares healthy versus injured human kidney tissue, laying a critical foundation for discovering new treatments.
- A recent clinical trial demonstrated that a diet rich in fiber and low in processed foods may have benefits for human health by nurturing the gut microbiome.
- Scientists uncovered biological links between psychological stress and inflammatory bowel disease flare-ups.

FY 2023 Funding Support



Funding History*



FY 2025 President’s Budget

Request (in millions): \$2,310

*excludes mandatory T1D funding

Selected Current Activities

- NIDDK is supporting a national network of research institutions and community-based organizations to strengthen the engagement of communities and individuals from diverse backgrounds and enhance equity in type 2 diabetes research.
- A new consortium is characterizing a large cohort of youth at risk for type 2 diabetes through puberty to identify factors that contribute to youth-onset type 2 diabetes.
- The System Interventions to Achieve Early and Equitable Transplants Study (STEPS) is identifying people in need of a kidney transplant and determining whether outreach strategies focused on equity and patient needs can improve access to living donor kidney transplants.
- A multi-center study of people who developed diabetes after COVID-19 infection is investigating the clinical course and physiological processes underlying post-COVID-19 diabetes.
- A consortium for Chronic Pancreatitis, Diabetes and Pancreatic Cancer (CPDPC) is conducting a comprehensive study of individuals with chronic pancreatitis to gain insights that could pave the way for developing new treatments for the disease.

NIDDK at a Glance

2023 Research Project Grants*

Funded Principal Investigators: **929**
Competing Applications Awarded: **706**

*excludes mandatory T1D funding

Number of Full Time Employees: **670**

4-year average, FY 2020-2023



2023 Paylines and Early Stage Investigators (ESIs*)

R01 Payline: **16%**

ESI Payline: **25%**

ESI Renewal Payline: **19%**

Number of ESIs: **90**



*excludes new investigators who are not ESIs

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.



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Selected Recent Accomplishments

- Recent clinical trials testing artificial pancreas technologies for type 1 diabetes management led to the FDA approval of a new bionic pancreas device in people ages 6 and older and showed that another device (Control IQ) was effective in children between ages 2 and 5.
- Using a 3D model of the kidney, researchers discovered that sugar can promote cyst growth in polycystic kidney disease (PKD), pointing to sugar uptake inhibitors as a potential treatment.
- Studies in people who do shift work and in mice showed that time-restricted eating can lead to health benefits, improving our understanding of how meal timing can affect metabolic health.
- New findings provided insights into different types of overactive bladder urinary symptoms, which may help identify more targeted treatment approaches.
- Researchers found that an FDA mandate limiting the acetaminophen levels in combination acetaminophen-opioid pain relievers was associated with a decreased incidence of liver failure and hospitalization due to these medications.

Selected Future Research Initiatives

- NIDDK will support further research on reducing disparities and achieving health equity in diseases within the NIDDK mission that disproportionately affect underserved populations.
- A new randomized controlled trial will evaluate novel gluten detection technologies to improve celiac disease management in newly diagnosed adults.
- The Gut-Brain Communication in Parkinson's Disease Consortium (GBPDC) will accelerate research on the role of gastrointestinal symptoms and gut-brain communication in Parkinson's disease to help develop novel diagnostic tools and biomarkers for Parkinson's disease.
- A new consortium will develop community-engaged interventions that dismantle the effects of structural racism to reduce health disparities among people living with kidney disease.
- A Working Group of NIDDK's Advisory Council on diabetes heterogeneity will identify research gaps and inform future opportunities, and a multi-disciplinary consortium will aim to discover new, more precise measures to classify subtypes of type 2 diabetes.