Why Invest in NIH?

By ensuring steady and sustainable annual increases to the budget for the **National Institutes of Health**, Congress can save and improve lives, advance innovation and fuel the economy. Here are some other reasons why Congress must act to **#keepNIHstrong**.

When we invest in the NIH, we are investing in the knowledge and discoveries that will improve health and cure disease and we are investing in PEOPLE — people who will go on to be physicians, scientists, entrepreneurs, researchers and educators, helping to develop the next generation of researchers and maintain America's leadership in biomedical innovation.

Featured

- **Anthony J. Baucum II** • PhD, Indiana University
- **Deanna Barch** • PhD, Washington University in St. Louis
- **Sadiya Khan** • MD, MSc, Northwestern University
- **Adam Berger**, MD-PhD student, MIT and Harvard University
- **Megan Zuelsdorff** • PhD, University of Wisconsin-Madison
- **Bonnielin Swenor** • PhD, MPH, Johns Hopkins University
- **Deblina Sarkar** • PhD, MIT
- **Nicole Putnam** • PhD, University of Maryland
- **Brad Grueter** • PhD, Vanderbilt University

Meet some of the people whose careers were shaped through NIH research and who are helping to launch the careers of others.

Researching the brain to better understand addiction, and engaging underrepresented minority students in the study of neuroscience

Anthony J. Baucum II • PhD

Associate Professor of Pharmacology and Toxicology
Indiana University School of Medicine
Indianapolis, IN

I am the principal investigator currently running a research laboratory that focuses on understanding how the brain works and how specific molecules within the brain control motor function, learning, and behaviors. I am also part of a faculty team at Indiana University-Purdue University Indianapolis with an NIH grant to run a program designed to increase the diversity of neuroscience scholars at the predoctoral, postdoctoral, and (ultimately) faculty levels — the Neuroscience Experience and Undergraduate Research Opportunities Program (NEUROP).

The NIH has been critical at all stages of my career. This includes a training grant (T32) during my postdoctoral studies at Vanderbilt University School of Medicine that strengthened my interests and training in neurogenomics; a research career development award (K01) that aided in my transition to my first faculty position in the Department of Biology at Indiana University-Purdue University Indianapolis; and a research award (R21/R33) from the National Institute on Drug Abuse within the NIH that allowed me to generate new tools to further understand the function of a specific molecule within the brain that my laboratory works on.

Learn more about **Dr. Baucum** and **NEUROP**.

Image credit | Sean Garcia/Washington University

Helping to build the body of research on brain development and health, and training the next generation of scientists focusing on mental health

Deanna Barch • PhD

Professor and Chair of the Department of Psychological & Brain Sciences in Arts & Sciences
Gregory B. Couch Professor of Psychiatry and Professor of Radiology in the School of Medicine
Washington University in St. Louis
Member, National Academy of Medicine
St. Louis, IL

My goal is to better understand the development and longitudinal change in brain structure and function that support cognitive and affective function across the lifespan in both health and disease. To do this, my research focuses on the developmental interplay among cognition, emotion and brain function.

The NIH has been enormously helpful in funding research and training grants, allowing me to support the development of the next generation of scientists addressing the most pressing problems in human health and wellbeing. NIH funding has helped me to train 100s of undergraduate and graduate students; postdoctoral fellows; and early career faculty whose work is focused on preventing and treating mental health challenges over a person's lifetime.

Learn more about **Dr. Barch** and recent research on adolescent brain cognitive development and **suicidal thoughts** in young people.

Providing clinical care and contributing to NIH's national HeartShare study

Sadiya Khan • MD, MSc

Assistant Professor of Medicine (Cardiology) and Preventive Medicine (Epidemiology), Northwestern University Feinberg School of Medicine
Board Certified Physician of Cardiovascular Disease and Internal Medicine, Northwestern Medicine
Chicago, IL

As a practicing cardiologist, my laboratory examines the epidemiology of and risk for heart failure with the goal of translating research into clinical practice to improve cardiovascular outcomes and care on an individual and population level.

I am a proud recipient of the Multidisciplinary Career Development program, a NIH/NCATS-sponsored career development award (KL2) supporting early-career faculty at Northwestern, which enables my work as a physician-scientist committed to translating research findings into clinical practice. I additionally lead one of six clinical centers in a new NIH-funded study on patients with the most common type of heart failure, diastolic heart failure. The goal of the HeartShare study aims to create and monitor a cohort of patients across the United States with the disease to better understand it and ultimately, identify better treatment options.

Learn more about **Dr. Khan** and the **HeartShare** study.

Working to improve clinical outcomes for patients with diabetic ulcers

Adam Berger

MD-PhD Student
Massachusetts Institute of Technology and Harvard Medical School
Cambridge, MA

Current treatments for non-healing diabetic wounds are often unable to regenerate damaged tissue, leading to downstream complications and high rates of wounds reopening. My work aims to explore drug carriers for gene therapies that can promote tissue healing and regeneration.

During my time in graduate school, I have worked in an NIH-funded lab and been awarded my own NIH fellowship (F32). These funds, particularly my NIH fellowship, have empowered me to craft and execute a well-tailored training plan to enable my success in becoming an independent physician-scientist and to accelerate solutions to a critical health problem.

Learn more about **Adam Berger** and his passion for **service.**

Working to understand Alzheimer's disease and ensuring diverse communities are included in dementia research

Megan Zuelsdorff • PhD

Assistant Professor School of Nursing, University of Wisconsin-Madison
Investigator, Wisconsin Alzheimer's Disease Research Center
Madison, WI

I am an epidemiologist committed to illuminating modifiable sources of dementia risk and resilience. Specifically, I explore different aspects of our social environments — such as the challenges and stresses we have faced, as well as our connections with family, friends, and community resources — and the role they play in shaping cognitive and brain health as we age.

With NIH funding I am working with Wisconsin tribal partners and expanding my work to ensure that we're hearing the voices and representing the experiences of diverse communities across the state.

Learn more about **Dr. Zuelsdorff** and the **Wisconsin Alzheimer's Disease Research Center.**

Studying vision and aging, and changing the paradigm of how disability is viewed in clinical and research settings

Bonnielin Swenor • PhD, MPH

Associate Professor of Ophthalmology, Johns Hopkins University
Director of the Johns Hopkins University Disability Health Research Center
Baltimore, MD

Motivated by my personal experience with vision impairment, my research takes a data-driven approach to addressing health inequities for people with disabilities. My work has centered around vision and aging, access to care and disability inclusion. I am also very focused on making careers in research more accessible to people to people with disabilities.

I am a recipient of an NIH Career Development Award (K01) from the National Institute on Aging, and my research is currently supported by additional NIH grant funding. I also have a two-year conference grant from NIH to develop best practices for making scientific and medical conferences accessible for individuals who are blind or have low vision.

Learn more about **Dr. Swenor** and her efforts to make careers in research **more accessible** to people with disabilities.

Combining electrical engineering, physics and biology to push the frontiers of medical technologies

Deblina Sarkar • PhD

Assistant Professor
Massachusetts Institute of Technology
Cambridge, MA

I make subcellular sized nanoelectronics that can be placed in the body to, for example, map neurons in the brain, modulate them for therapeutics, remotely monitor health and detect diseases at an early stage. The devices are wireless and coated with biomolecules such that they can effectively camouflage and trick the body into thinking that it is a part of its own biological system enabling a seamless nanomachine-bio hybrid.

NIH plays a critical role in my career, not the least of which is the support I received from NIH as a postdoc at MIT (K99) and the Pathway to Independence Award (R00) to start my own research group. NIH makes my research possible!

Learn more about **Dr. Sarkar** and her **inventions.**

Advancing the ability to detect and diagnose infectious diseases

Nicole Putnam • PhD

Assistant Professor of Pathology, University of Maryland School of Medicine
Assistant Director of Clinical Microbiology, University of Maryland Medical Center
Baltimore, MD

I am part of the leadership team that oversees clinical microbiology diagnostic testing for the University of Maryland hospital system. This involves interpreting test results for the diagnosis of infectious diseases. Academically, I assist with teaching of residents and fellows while pursuing research to advance diagnostic technology and clinical knowledge within microbiology.

My training in microbiology and immunology research was conducted in NIH-funded labs for my master's and doctorate degrees. I was granted an individual pre-doctoral NIH Research Service Award (F31) that funded the last two years in my Ph.D. program. Also, my professional goal of pursuing clinical microbiology was supported by the ASPIRE Program at Vanderbilt University through the NIH Broadening Experiences in Scientific Training (BEST) grant.

Learn more about **Dr. Putnam** and the **ASPIRE** program.

Reducing the burden of substance use and major depressive disorders

Brad Grueter • PhD

Assistant Professor of Anesthesiology
Vanderbilt University Medical Center
Nashville, TN

My research program investigates the molecular and neural network mechanisms underlying motivation-to-action behavior. The fundamental knowledge gained by our research seeks to help reduce the burden of neuropsychiatric diseases including substance use disorders and major depressive disorder.

My 20+ year career in science has been funded by the NIH, specifically the National Institute on Drug Abuse (NIDA). I have personally been funded by NIDA continuously from a postdoctoral National Research Service Award, Pathway to Independence Award (K99/R00) and a recently renewed research project grant (R01). Thus, funding for the NIH has been instrumental in my career as a neurobiologist.

NIH funding also has supported the next generation of scientists training in my lab including graduate and undergraduate students.

Learn more about **Dr. Grueter.**

NIH-supported research is advancing our knowledge and developing the next generation of researchers.