
U.S. Federal Government Department and Agency Research Support

By far, the single largest supporter of research and sponsored projects in the United States is the U.S. Federal Government. This includes research conducted in support of:

- agency intramural laboratories—research labs within the National Cancer Institute;
- facilities and federally funded research and development centers (FFRDCs)—Ames Laboratory, Jet Propulsion Laboratory; and
- sponsored programs at nonfederal organizations—academic institutions, hospitals, nonprofit research institutions, and small businesses.

Fifteen federal departments and twelve other federal agencies engage in and/or provide funding for sponsored programs, primarily in the U.S. The majority of the annual funding total for science and engineering is accounted for by the R&D activities of the following seven departments and agencies.

DEPARTMENT OF AGRICULTURE (USDA)

The [**National Institute of Food and Agriculture \(NIFA\)**](#) is the USDA's principal extramural research agency, funding individuals; institutions; and public, private, and non-profit organizations in support of research, education, and extension, with the majority of awards being funded through the Agriculture and Food Research Initiative (AFRI). There are five NIFA units—Institute of Food Production and Sustainability; the Institute of Bioenergy, Climate, and Environment; the Institute of Food Safety and Nutrition; the Institute of Youth, Family, and Community; and the Center for International Programs. Discretionary appropriations for NIFA are provided under the annual Agriculture Appropriations Act, while mandatory appropriations are provided through the Farm Bill and other authorizing legislation. USDA priority science areas include food security, water, climate variability and change, sustainable bioenergy, childhood obesity prevention, and food safety. NIFA's Federal Assistance Policy Guide describes agency policies and procedures. Key partners are more than 100 institutions of higher education making up the land grant university system.

More directed funding for sponsored programs activities announced in Grants.gov are also supported by the Department's ***Agriculture Research Service, Forest Service*** and ***Natural Resource Conservation Service***

DEPARTMENT OF COMMERCE (DOC)

The [**National Institute of Standards and Technology \(NIST\)**](#), has program announcements and

other special programs in mission-relevant areas. A major component of the mission is NIST is an effort to develop a diverse, world-class pool of scientists and engineers to engage in NIST's measurement science and standards research, and to support the development of a general population that understands and appreciates measurement science and standards. NIST also seeks to collaborate with a wide range of organizations, including but not limited to minority-serving institutions such as Historically Black colleges and universities, as well as community colleges, in support of NIST's mission

The [National Oceanic and Atmospheric Administration \(NOAA\)](#) funds mission-relevant programs in such diverse areas as fisheries, coastal management, ocean exploration, and climate. NOAA's research capacity is enhanced in its support of 16 Cooperative Institutes consisting of 80 universities and research institutions across 33 states and the District of Columbia. In addition, for over 50 years, the National Sea Grant Program has supported coastal and Great Lakes communities through research, extension, and education. As several NOAA programs provide direct funding to states, researchers at universities and other research organizations may partner with state agencies to conduct sponsored projects.

DEPARTMENT OF DEFENSE (DOD)

While the share of federally-funded R&D expenditures to institutions of higher education from the DoD is only slightly more than that of the NSF (8.2% compared to 6.2% in 2022), understanding the DOD's programs in support of research and training is much less straightforward than the NSF or other U.S. federal agencies.

The [Air Force Office of Scientific Research \(AFOSR\)](#), part of the Air Force Research Lab (AFRL), funds research and educational programs at universities and industry laboratories. Proposals for research are solicited through annual and special Broad Agency Announcements (BAA) and special programs in mission-relevant areas of engineering and complex systems, information and networks, physical sciences, chemistry and biological sciences.

[Army Medical Research and Materiel Command \(MRMC\)](#) oversees the *Congressionally Directed Medical Research Programs (CDMRP)*. The mission of CDMRP is to fund high impact, high risk and high gain projects that advance paradigm shifting research, solutions that will lead to cures or improvements in patient care, or breakthrough technologies and resources for clinical benefit. The program differs from many U.S. federal funding programs in that a pre-application submission is required before any formal submission to Grants.gov.

The [Army Research Office \(ARO\)](#), part of the Army Research Laboratory (ARL), funds basic and applied fundamental research in engineering and the physical, information, and life sciences.

Basic research proposals from educational institutions, nonprofit organizations, and private industry are typically solicited through Broad Agency Announcements.

To pursue transformative—rather than incremental—advances, the [Defense Advanced Research Projects Agency \(DARPA\)](#) uses academic, corporate, and governmental partners to apply multi-disciplinary approaches to advance knowledge through basic research and create innovative technologies that address practical problems. In addition to program-specific contract opportunities, each technical office maintains a Broad Agency Announcement, refreshed annually, in diverse areas including biological technologies, defense sciences, information innovation, microsystems technology, strategic technology, and tactical technology.

The [National Security Agency \(NSA\)](#) supports workshops, conferences, and research experiences for undergraduates in the mathematical sciences. It also funds project-specific contracts that support the agency's research mission, particularly in signals intelligence and cybersecurity.

The [Office of Naval Research \(ONR\)](#) coordinates the science and technology programs of the U.S. Navy and Marine Corps, funding mission-relevant basic and applied research in math, computer science, and electronics; ocean and atmospheric sciences; engineering, physical & materials sciences; cognitive and medical human systems. ONR solicits applications through annual and special Broad Agency Announcements (BAA) and special Funding Opportunity Announcements (FOA).

DEPARTMENT OF EDUCATION (ED)

The mission of the Department of Education's [Institute of Education Sciences \(IES\)](#) is to provide rigorous and relevant evidence on which to ground education practice and policy and share this information broadly. By identifying what works, what doesn't, and why, IES strives to improve educational outcomes for all students, particularly those at risk of failure. IES research and training programs are announced in the [Federal Register](#).

At various times, other individual units within the Department have needs for demonstration and interpretive projects: these opportunities are also published in the [Federal Register](#).

DEPARTMENT OF ENERGY (DOE)

The [Office of Science](#) is the basic scientific research arm of the Department of Energy, managing a research portfolio through [seven core program offices](#): advanced scientific computing research, basic energy sciences, biological and environmental research, fusion

energy Sciences, high energy physics, nuclear physics, and accelerator R&D and production. FOAs are published in the areas of:

- energy efficiency and renewable energy
- nuclear energy
- power grid, electricity delivery, and energy reliability
- Advanced Research Projects Agency-Energy (ARPA-H)

In addition, the Office of Science manages and supports [additional programs and activities](#), including the Workforce Development for Teachers and Scientists Program and the DOE Small Business Programs. Department of Energy Laboratories (e.g., Argonne National Laboratory and Lawrence Berkeley National Laboratory) provide unique opportunities for collaboration and may provide opportunities for limited research support.

The Office of Science also supports national user facilities that provide researchers with access to unique resources to conduct their research, including accelerators, colliders, supercomputers, light and neutron sources, and facilities for studying the nanoworld and the atmosphere.

DEPARTMENT OF HEALTH AND HUMAN SERVICES (DHHS OR HHS)

The Department of Health and Human Service is the largest grantmaking agency in the U.S. federal government. It includes the following four agencies.

The [Agency for Healthcare Quality and Research \(AHRQ\)](#) supports research and training to improve healthcare quality, effectiveness, accessibility, and cost-effectiveness. Policies and procedures, agency requests, and notices are published in the [Federal Register](#) and the [NIH Guide for Grants and Contracts](#).

The [Centers for Disease and Control and Prevention \(CDC\)](#) funds research and non-research public health programs that advance the Agency's public health mission domestically and abroad. In the fiscal year 2023, the Office of Grants Services (OGS) supported 6,982 grant awards to 2,623 recipients.

The [Food and Drug Administration \(FDA\)](#) supports grants, cooperative agreements, and contracts to support mission-specific food and drug safety issues, including medical devices, radiation-emitting products, vaccines, blood and biologics, animal and veterinary medicines, cosmetics, and tobacco products.

The **National Institutes of Health** is the world's largest funder of biomedical research, awarding nearly \$34.9 billion in extramural grants, cooperative agreements, fellowships, loan repayments, and other transaction agreements in FY2023. NIH supported 58,951 competing and non-competing in grants to 2,743 academic universities, hospitals, small businesses, and other organizations throughout the U.S. and internationally in FY2023. The NIH is composed of 27 separate institutes and centers (ICs), including 24 that award extramural grants and contracts:

- **Fogarty International Center (FIC)** supports and facilitates global health research conducted by U.S. and international investigators, builds partnerships between health research institutions in the U.S. and abroad, and trains scientists to address global health needs.
- **National Cancer Institute (NCI)** leads, conducts, and supports cancer research to advance scientific knowledge and help all people live longer, healthier lives.
- **National Center for Advancing Translational Sciences (NCATS)** offers an array of funding programs designed to help researchers translate basic scientific knowledge into interventions that improve human health.
- **National Center for Complementary and Integrative Health (NCCIH)** supports research and training in complementary and integrative health involving natural products and mind and body practices.
- **National Eye Institute (NEI)** funds research and training concerning blinding eye diseases, visual disorders, mechanisms of visual function, preservation of sight, and the special health problems and requirements of the blind.
- **National Heart, Lung, and Blood Institute (NHLBI)** supports research and training to prevent and treat heart, lung, blood, and sleep disorders.
- **National Human Genome Research Institute (NHGRI)** funds genomic research and training around the areas of: genomic data, structure and function of genomes, computational genomics, genomics of disease, genomic sequencing, clinical implementation, and ethical, legal, and social implications in society.
- **National Institute on Aging (NIA)** supports genetic, biological, clinical, behavioural, social, and economic research and training on aging and the challenges and needs of older adults and the nature of healthy aging. It is also the lead federal agency for Alzheimer's disease and related dementias research.
- **National Institute on Alcohol Abuse and Alcoholism (NIAAA)** funds basic and clinical research and training to address alcohol-related issues across the lifespan.

- [**National Institute of Allergy and Infectious Disease \(NIAID\)**](#) supports research and training to understand, treat, and prevent infectious, immunologic, and allergic diseases.
- [**National Institute of Arthritis and Musculoskeletal Diseases \(NIAMS\)**](#) funds research and training into the causes, treatment, and prevention of arthritis and musculoskeletal and skin diseases.
- [**National Institute of Biomedical Imaging and Bioengineering \(NIBIB\)**](#) funds research and training in a variety of scientific areas in bioimaging, bioengineering and informatics.
- [**National Institute of Child Health and Human Development \(NICHD\)**](#) supports research and training to understand human development, improve reproductive health, enhance the lives of children and adolescents, and optimize abilities for all.
- [**National Institute on Deafness and Other Communication Disorders \(NIDCD\)**](#) funds research and training on hearing, balance, taste and smell, voice, speech, and language.
- [**National Institute of Dental and Craniofacial Research \(NIDCR\)**](#) funds basic, translational, and clinical research and training to improve dental, oral, and craniofacial health.
- [**National Institute of Diabetes and Digestive and Kidney Diseases \(NIDDK\)**](#) supports research and training on diabetes and other endocrine and metabolic diseases; digestive diseases, nutritional disorders and obesity; and kidney, liver, urologic and hematologic diseases.
- [**National Institute on Drug Abuse \(NIDA\)**](#) funds basic, clinical, and epidemiological research on drug use, its consequences, and the underlying neurobiological, behavioural, and social mechanisms.
- [**National Institute of Environmental Health Sciences \(NIEHS\)**](#) supports research and training that investigates the interplay between environmental exposures, human biology, genetics, and common diseases to help prevent disease and improve health.
- [**National Institute of General Medical Sciences \(NIGMS\)**](#) supports basic research and training that increases understanding of biological processes and lays the foundation for advances in disease diagnosis, treatment, and prevention.
- [**National Institute of Mental Health \(NIMH\)**](#) funds basic and clinical research and training to transform the understanding and treatment of mental illnesses.
- [**National Institute on Minority Health and Health Disparities \(NIMHD\)**](#) supports research and training programs intended to improve minority health and reduce health disparities in the United States.

- [National Institute of Neurological Disorders and Stroke \(NINDS\)](#) funds basic, translational, and clinical neuroscience research and training.
- [National Institute of Nursing Research \(NINR\)](#) supports research, and training in the areas of health equity, social determinants of health, population and community health, prevention and health promotion systems, and models of care.
- [National Library of Medicine \(NLM\)](#) supports fundamental and applied research and training to advance biomedical knowledge and informatics innovations.

A 25th center, the [Center for Scientific Review \(CSR\)](#), receives all of the applications received by the NIH each year, assigns them to the appropriate NIH institutes for funding consideration, and provides the scientific merit review of the majority of research grant applications. The [NIH Guide for Grants and Contracts](#) weekly publishes funding opportunity announcements and notices, and the [NIH Grants Policy Statement](#), published annually, provides policy guidance for NIH grants and cooperative agreements. Prepared annually, the [NIH Data Book \(NDB\)](#) provides basic summary statistics on extramural grants and contract awards, grant applications, the organizations that NIH supports, the trainees and fellows supported through NIH programs, and the national biomedical workforce.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

The National Aeronautics and Space Administration supports fellowships, as well as research in a wide range of science and technology disciplines. Proposals can be submitted in response to both solicited and unsolicited FOAs. NASA centers and facilities provide unique opportunities for collaboration and may provide opportunities for directed research support. NASA research funding opportunities are concentrated at one site in the [NASA Solicitation and Proposal Integrated Review and Evaluation System \(NSPIRES\)](#).

NATIONAL ENDOWMENT FOR THE ARTS (NEA)

The [National Endowment for the Arts](#) awards grants to organizations and to individuals for projects only. Projects may consist of one or more specific events or activities, with matching grants ranging from \$10,000 to \$100,000. NEA provides direct support to creative writers and literary translators of distinction through Literature Fellowships.

NATIONAL ENDOWMENT FOR THE HUMANITIES (NEH)

The [National Endowment for the Humanities](#) offers a variety of grant programs to individuals and organizations for a broad range of programs to promote the humanities, leading to such varied outputs as books, publications, preservation, curriculum, workshops, faculty development, and teaching resources. Programs also include special initiative for tribal colleges

and universities, Hispanic-serving institutions, community colleges, and historically black colleges and universities. NEH's Fiscal Year 2019 budget justification responded to the Administration's proposal for terminating the agency in FY2019. The proposed agency closedown has now been moved to FY2020.

NATIONAL SCIENCE FOUNDATION (NSF)

The [National Science Foundation](#) is an independent federal agency supporting research and education in all fields of fundamental science and engineering, except for the medical sciences. With an annual budget of \$9.9 billion (FY2023), the NSF is the funding source for about 25% of all federally supported basic research conducted by America's colleges and universities. In many fields such as mathematics, computer science, and the social sciences, NSF is the major source of federal backing. The NSF is composed of seven separate directorates that fund science and engineering research, including:

- [Biological Sciences \(BIO\)](#) supports research to advance the understanding of the principles and mechanisms governing life and is organized into five divisions: Biological Infrastructure; Environmental Biology; Integrative Organismal Systems; Molecular and Cellular Biosciences; Emerging Frontiers.
- [Computer and Information Science and Engineering \(CISE\)](#) supports research and education in computer and information science and engineering and is organized into four divisions: Advanced Cyberinfrastructure; Computing and Communication Foundations; Computer and Network Systems; and Information and Intelligent Systems.
- [Engineering \(ENG\)](#) provides almost one-third of the U.S. federal funding for fundamental research in engineering at academic institutions. Five divisions support research and education programs across the engineering spectrum: Chemical, Bioengineering, Environmental and Transport Systems; Civil, Mechanical and Manufacturing Innovation; Electrical, Communications, and Cyber Systems; Engineering Education and Centers; Emerging Frontiers and Multidisciplinary Activities.
- [Environmental Research & Education \(ERE\)](#) is an advisory committee focused on providing advice, recommendations and oversight concerning support for the NSF's environmental research and education portfolio.
- [Geosciences \(GEO\)](#) provides about 56% (FY2023) of the U.S. federal for basic research in the geosciences at academic institutions. The five divisions include Atmospheric and Geospace Sciences, Earth Sciences; Ocean Sciences; Research, Innovation, Synergies and Education; and Polar Programs.

- [**Mathematical and Physical Sciences \(MPS\)**](#) supports research and education addressing the most compelling scientific questions in the mathematical and physical sciences and is organized into six divisions: Astronomical Sciences, Chemistry, Materials Research, Mathematical Sciences, Physics, and Office of Strategic Initiatives.
- [**Social, Behavioral and Economic Sciences \(SBE\)**](#) supports basic research on people and society to discover fundamental principles of human behavior, and is organized into six divisions: Behavioral and Cognitive Sciences; Sciences and Engineering Statistics; Social and Economic Sciences and Multidisciplinary Activities.
- [**Office of International Science and Engineering \(OISE\)**](#) is the NSF focal point for international science and engineering activities both inside and outside NSF.
- [**Education and Human Resources \(EHR\)**](#) supports excellence in U.S. STEM education at all levels, in all settings.