

Introduction to NIH Grants

NIH Mission

- NIH's mission is to seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce illness and disability.

NIH Goals

- to **foster** fundamental creative discoveries, innovative research strategies, and their applications as a basis for ultimately protecting and improving health
- to **develop, maintain, and renew** scientific human and physical resources that will ensure the Nation's capability to prevent disease
- to **expand** the knowledge base in medical and associated sciences in order to enhance the Nation's economic well-being and ensure a continued high return on the public investment in research
- to **exemplify and promote** the highest level of scientific integrity, public accountability, and social responsibility in the conduct of science

NIH Research Domains

- In realizing these goals, the NIH provides leadership and direction to programs designed to improve the health of the Nation by conducting and supporting research:
 - in the causes, diagnosis, prevention, and cure of human diseases;
 - in the processes of human growth and development;
 - in the biological effects of environmental contaminants;
 - in the understanding of mental, addictive and physical disorders; and
 - in directing programs for the collection, dissemination, and exchange of information in medicine and health, including the development and support of medical libraries and the training of medical librarians and other health information specialists.

NIH Mechanisms

- **R Series** Research Grants
- **K Series** Career Development Awards
- **T/F Series** Research Training/Fellowships
- **P Series** Program Project/Center Grants
- **Resource Grants**
- **Early Stage Investigators** – 10 years since terminal degree

Types of Research/ Career Grants at NIH

- **R03** Small Grant \$50,000/PER 2 years
- **R15** Academic Enhancement \$300,000 (total)/3 yrs
- **R21** Exploratory/Developmental \$275,000 (total)/2yrs
- **K01** Mentored Research Scientist Development

NIH Institutes and Centers

- [National Cancer Institute \(NCI\)](#)
- [National Eye Institute \(NEI\)](#)
- [National Heart, Lung, and Blood Institute \(NHLBI\)](#)
- [National Human Genome Research Institute \(NHGRI\)](#)
- [National Institute on Aging \(NIA\)](#)
- [National Institute on Alcohol Abuse and Alcoholism \(NIAAA\)](#)
- [National Institute of Allergy and Infectious Diseases \(NIAID\)](#)
- [National Institute of Arthritis and Musculoskeletal and Skin Diseases \(NIAMS\)](#)
- [National Institute of Biomedical Imaging and Bioengineering \(NIBIB\)](#)
- [*Eunice Kennedy Shriver* National Institute of Child Health and Human Development \(NICHD\)](#)
- [National Institute on Deafness and Other Communication Disorders \(NIDCD\)](#)
- [National Institute of Dental and Craniofacial Research \(NIDCR\)](#)
- [National Institute of Diabetes and Digestive and Kidney Diseases \(NIDDK\)](#)
- [National Institute on Drug Abuse \(NIDA\)](#)

NIH Institutes and Centers (cont.)

- [\(NIEHS\)](#)
- [National Institute of General Medical Sciences \(NIGMS\)](#)
- [National Institute of Mental Health \(NIMH\)](#)
- [National Institute on Minority Health and Health Disparities \(NIMHD\)](#)
- [National Institute of Neurological Disorders and Stroke \(NINDS\)](#)
- [National Institute of Nursing Research \(NINR\)](#)
- [National Library of Medicine \(NLM\)](#)

NIH Centers

- [Center for Information Technology \(CIT\)](#)
- [Center for Scientific Review \(CSR\)](#)
- [Fogarty International Center \(FIC\)](#)
- [National Center for Advancing Translational Sciences \(NCATS\)](#)
- [National Center for Complementary and Alternative Medicine \(NCCAM\)](#)
- [National Center for Research Resources \(NCRR\)](#) — (April 13, 1962 – December 23, 2011)
- [NIH Clinical Center \(CC\)](#)

Funding Rates

	R01 Success	R03 Success	R15 Success	R21 Success
FIC	18.8	9.9	NA	35.7
NCI	14.6	14.6	13	10.6
NEI	27.9	NA	16.7	14.5
NHLBI	15.9	0	13.9	14.5
NHGRI	27.8	15.8	0	13.3
NIA	13.1	15.8	3.3	11.3
NIAAA	20.6	13.3	4.8	17.2
NIAID	15.1	20.3	14.5	16.6
NIAMS	17.4	14	7.7	13
NIBIB	17.3	13.5	6.1	11.2
NICHD	12.1	12.5	10.1	8.4
NIDCD	26.1	30.3	8	11.8
NIDCR	21.9	18.2	8	10.4
NIDDK	18.2	46.8	6.6	8.8
NIDA	19.8	19.6	14.3	19.4
NIEHS	14.7	19.7	20.4	12.4
NIGMS	20.8	NA	14.8	9
NIMH	19.5	10.1	17.2	16.9
NIMHD	4.1	0	NA	12.5
NINDS	19.8	18	13.7	17.3
NINR	11.6	4.3	16.7	5.1
NLM	16.4	NA	0	3.4
NCCAM	11.8	NA	15.8	6.3

Evaluation Criteria

- **Significance.** Does the project address an important problem or a critical barrier to progress in the field? If the aims of the project are achieved, how will scientific knowledge, technical capability, and/or clinical practice be improved? How will successful completion of the aims change the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field?
- **Investigator(s).** Are the PD/PIs, collaborators, and other researchers well suited to the project? If Early Stage Investigators or New Investigators, or in the early stages of independent careers, do they have appropriate experience and training? If established, have they demonstrated an ongoing record of accomplishments that have advanced their field(s)? If the project is collaborative or multi-PD/PI, do the investigators have complementary and integrated expertise; are their leadership approach, governance and organizational structure appropriate for the project?
- **Innovation.** Does the application challenge and seek to shift current research or clinical practice paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation, or interventions? Are the concepts, approaches or methodologies, instrumentation, or interventions novel to one field of research or novel in a broad sense? Is a refinement, improvement, or new application of theoretical concepts, approaches or methodologies, instrumentation, or interventions proposed?

Evaluation Criteria

- **Approach.** Are the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the project? Are potential problems, alternative strategies, and benchmarks for success presented? If the project is in the early stages of development, will the strategy establish feasibility and will particularly risky aspects be managed? If the project involves clinical research, are the plans for 1) protection of human subjects from research risks, and 2) inclusion of minorities and members of both sexes/genders, as well as the inclusion of children, justified in terms of the scientific goals and research strategy proposed?
- **Environment.** Will the scientific environment in which the work will be done contribute to the probability of success? Are the institutional support, equipment and other physical resources available to the investigators adequate for the project proposed? Will the project benefit from unique features of the scientific environment, subject populations, or collaborative arrangements?

Scoring

- 1 Exceptional
- 2 Outstanding
- 3 Excellent
- 4 Very Good
- 5 Good
- 6 Satisfactory
- Below 6 – NO WAY!
- Averaged to be 10-90

K01 Mentored Research Scientist Development Award

The purpose of the NIH Mentored Research Scientist Development Award (K01) is to provide support and “**protected time**” (three, four, or five years) for an intensive, supervised career development experience in the biomedical, behavioral, or clinical sciences leading to research independence.

Although all of the participating NIH Institutes and Centers (ICs) use this support mechanism to support career development experiences that lead to research independence, some ICs use the K01 award for individuals who propose to train in a new field or for individuals who have had a hiatus in their research career because of illness or pressing family circumstances. Other ICs utilize the K01 award to increase research workforce diversity by providing enhanced research career development opportunities.

An Aside about Special Populations

A. Individuals from **racial and ethnic** groups that have been shown by the National Science Foundation to be underrepresented in health-related sciences on a national basis (see <http://www.nsf.gov/statistics/showpub.cfm?TopID=2&SubID=27>)

In addition, it is recognized that under-representation can vary from setting to setting and individuals from racial or ethnic groups that can be convincingly demonstrated to be underrepresented by the grantee institution should be encouraged to participate in this program.

B. Individuals with **disabilities**, who are defined as those with a physical or mental impairment that substantially limits one or more major life activities.

C. Individuals from **disadvantaged backgrounds** who are defined as:

1. Individuals who come from a family with an annual **income** below established low-income thresholds.
2. Individuals who come from a **social, cultural, or educational environment** such as that found in certain rural or inner-city environments that have demonstrably and recently directly **inhibited the individual from obtaining the knowledge, skills, and abilities necessary to develop and participate in a research career.**

NIH the Big Picture



- https://www.youtube.com/watch?v=rNwsg_PR90w