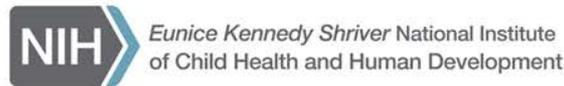


NIH Research Support Mechanisms for Young Investigators

Uma M. Reddy, MD, MPH
Pregnancy & Perinatology

NICHD





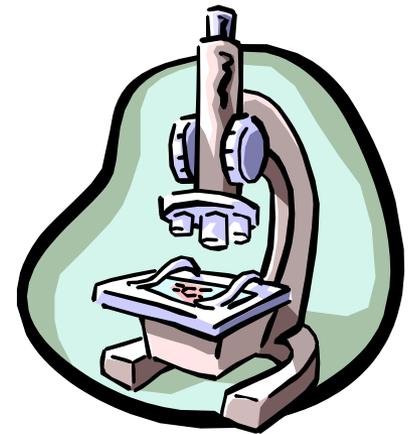
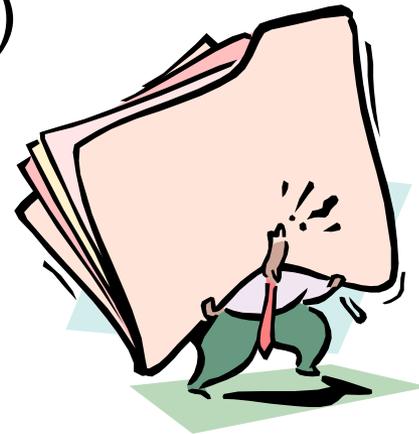
Topics To Be Covered

- Overview of Grant Mechanisms
 - Research Grants
 - Training
 - Fellowships
 - Career Development
- Supplements to existing grants
- NIH Extramural Loan Repayment Programs
- Non-NIH grant opportunities



NIH Grant Nomenclature

- Research Grants (“R”)
- Training (“F” “T”)
 - F = Individual fellowship
 - T = Institutional training grants
- Career development (“K”)





Clinical and Research Training

Career Stage

**MED / GRAD
STUDENT**

RESIDENT

**(Clinical Training)
FELLOW**

(Research Training)

INSTRUCTOR

FACULTY

Fellowships & Career Awards

← T32 /T35 Short-term Institutional Training Grant slots
F30 Pre-doctoral Fellowships (MD/PhD Programs)
Parent F31, Diversity F31

← T32 Institutional Training Grant (Fellowship slots)
F32 Individual NRSA Fellowship

← K12 Institutional Career Development Award

← K99-R00 Pathway to Independence Award

← K01 Mentored Research Scientist Development Award
← K08 Mentored Clinical Scientist Development Award
← K23 Mentored Patient-Oriented K Award

← K02 Independent Scientist Award (R01 req'd)
← K24 Mid-career Award in Patient-Oriented Research

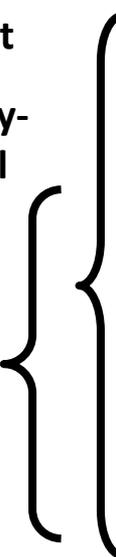


Research Grants

R03 Small Grant

R21 Exploratory-
Developmental
Grant

R01 Research
Project Grant





R01: Research Project Grant

- Objective:** Facilitate pursuit of scientific focus in investigator's interest/competence
- Eligibility:** Investigator from domestic or foreign institution/organization
- Support:** Up to 5 years (renewable)
- When to apply:**
- New:** February, June, October
 - Resubmitted/
Renewals** March, July, November



R03: NIH Small Grant

Objective: To provide limited funds for new research projects relevant to the NICHD mission and priority areas

Eligibility: Investigator from a domestic or foreign institution/organization
No concurrent grant application on same topic

Support: \$50,000/year, up to 2 years



R03: Small Grant

Types of Projects

- Pilot or Feasibility Studies
- Limited Research Studies
- Development of Research Methodology
- Reanalysis of Existing Data

- “Starter” grant- support to generate sufficient data for R01 submission
- No preliminary data is required but is highly advised to support hypothesis or show feasibility of methodology



R21: Exploratory/Developmental Research Grant

- Objective:** Support early/conceptual stages of projects that break new ground or direction
- Eligibility:** Investigator from domestic or foreign institution/organization
- Support:** ≤\$275,000 in direct costs for 2 years (not renewable)

Although no preliminary data is required,
it is highly advised!



R21: Exploratory/Developmental Research Grant

Types of Projects

- Novel Research Studies
 - new scientific paradigms
 - model systems
 - tools
 - agents
 - targets
 - technologies
- Usually high risk but high payoff
- Projects that increase knowledge in a well-established area will not be considered.
(Better suited for R01)



Review

- Standard NIH criteria for research grants
 - Significance — Does it address an important problem?
 - Approach — Is the study well designed?
 - Innovation — Does it involve novel concepts, approaches, methods or challenges existing paradigms
 - Investigator — Does the P.I. have the appropriate training or experience?
 - Environment — Are the institutional resources adequate?

Training & Career Development





Training & Career Development Fellowship Grants

- Postdoctoral Fellowship Award (F32): individual programs for basic or clinical postdoctoral training
- Institutional Training Grant (T32): support to institutions for basic or clinical pre- & postdoctoral training programs



National Research Service Award (F30/F31/F32 and T32)

- U.S. citizen, noncitizen national or permanent resident
- Full-time commitment (40 hours/week)
- Support for living expenses, tuition, fees, and limited travel & supplies
- Institution allowed to provide additional support, but can not interfere, detract from or prolong the fellowship
- No similar concurrent federally-funded awards



F32: National Research Service Award

- Objective:** Provide training to broaden scientific background; extend potential of individuals doing biomedical/ biobehavioral research
- Eligibility:** Doctoral degree (MD, DO, PhD, etc.) with experienced sponsor with research support to supervise research
- Support:** Up to 5 years (renewable)
- When to apply:** April, August, December (with start dates ~ 9 months later)



F32: National Research Service Award

- If fellowship less than 2 years, there is a service payback requirement
- Service payback
- Service obligation of 1 month for each month of support for the first 12 months
- Service obligation: engage in health-related research training, research, and/or teaching
- Two years of fellowship or clinical service satisfies the service obligation



F32: National Research Service Award

- Living expenses: based on years of postdoctoral experience (~\$42,000-56,000/year, FY2015)
- Tuition, Fees: 60% up to \$4,500
- Training-related expenses: \$7,850 (includes health insurance)



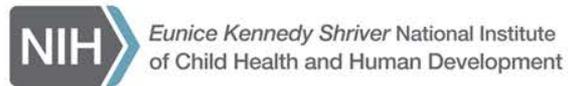
T32: National Research Service Award

- Objective:** Promote institutions to develop or enhance research training opportunities at the predoctoral, postdoctoral or health professional levels
- Eligibility:** Predoctoral or postdoctoral level (basic or clinical)
- Support:** <3 years postdoc

Payback provisions if <2 years

Trainees apply directly to the program site, not NIH

Common Career Awards (K)





Common Career Development Mechanisms

- Based on stage of career development
- Mentored research training
- K08, K12, K23 (clinicians with exceptions)
- Protect time of mid-career investigator and mentor young investigators
- K24 (clinicians only)



Mentored “K” Awards

Career Development to Independence

- Mentored Clinical Scientist Development Award (K08): mentored basic or clinical research project
- Mentored Patient-Oriented Research Career Development Award (K23): mentored patient-oriented research project
- Mentored Clinical Scientist Development Program (K12): institutional programs for mentored training and research for pediatrics & Ob/Gyn clinicians
- Pathway to Independence Award (K99/R00)



K Awards (K08/K23)

Eligibility

- Clinical doctoral degree (e.g., MD, DO, DDS, Nursing etc.)
 - Accepted for PhD is considered on a case-by-case basis. Special circumstances must be shown, such as a degree earned in a non-medical field or a substantial intervening period of clinical or non-research activities since completion of the PhD.
- US Citizen, non-citizen national, permanent resident
- No concurrent or pending NIH career development award
- Previous NIH PIs on RO1, R29, P01, K Award grants are NOT eligible
- But previous R03 or R21 PIs are eligible



K Awards (K08/K23)

- Requires at least one mentor
- Duration: 3-5 years
- Full time employment
- Level of research effort: 75%
- Support: NICHD salary \$100,000 (institute dependent) +\$25,000 (research expenses, tuition, etc.)
- Non-renewable
- Recipient encouraged to apply for independent research grant support during the award period (e.g., R03, R01)



K Awards (K08/K23)

Review

- NICHD Review Committees
- Criteria
 - Candidate — academic record & future potential
 - Career development plan — appropriateness for the achievement to scientific independence
 - Research plan — merit & appropriateness to career plans
 - Mentor — qualifications & mentoring track record
 - Environment — appropriateness & quality
 - Institutional commitment — assurance of 75% protected time, career development, facilities to support candidate



K12: Mentored Clinical Scientist Development Programs

- Objective: Support institutional programs for research training and career development for clinicians in pediatrics & obstetrics & gynecology committed to careers in academic medicine
- Programs:
 - Pediatric Scientist Development Program (PSDP)
 - Reproductive Scientist Developmental Program (RSDP)
 - Women's reproductive health research career development centers(WRHR)
 - Child health research career development centers (CHRCDC)
 - Building Interdisciplinary Research in Women's Health (BIRCWH)
- Trainees apply directly to the program site, not NIH



K99/R00: Pathway to Independence Award

- Up to 5 years of support
- Two phases
- 1-2 years of mentored support
- Up to 3 years of independent support contingent on an independent research position
- Non citizens are eligible
- PA-15-083 <http://grants.nih.gov/grants/guide/pa-files/PA-14-042.html>



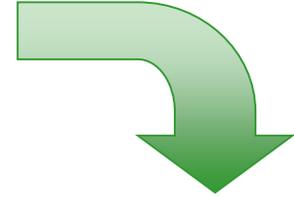
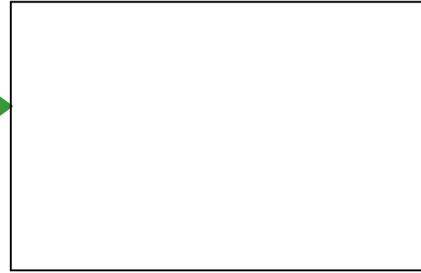
K99/R00: Pathway to Independence Award

- No more than 4 years of postdoctoral research experience and no previous major NIH support or non-NIH grant support >\$100,000 (direct costs)/year
- Applicants
 - Final years of their mentored research experience
 - Poised to embark on an independent research career in a tenure-track or equivalent position
 - If applicant has faculty or non-mentored research position – not eligible
 - PI on current or prior R03 or R21 – not eligible

Researcher



Scientific Review Panel



Initiates grant proposal:

- New project
- Continuing project

Scientists evaluate scientific merit of grant proposal

Program Officer



Main contact for applicant
Helps interpret review results



Congress

Institute National Advisory Councils

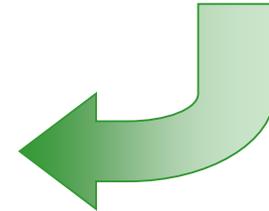


Assess programs
Approve applications
Public members

Institute Director



Makes final decision
Allocates funds
Provides annual justification to Congress



Supplement Programs





Diversity in Health Related Research PA-15-322

- Administrative supplements to an ongoing grant
 - Application submitted by PI of R01, R10, R18, R22, R24, R35, R37, R43, R44, R41, R42, P01, P20, P50, P51, P60, U01, U10, U19, U41, U42, U54, S06
 - Submit to awarding component of parent grant
 - Improve diversity of workforce
 - UNDERREPRESENTED students, post docs, eligible investigators
- Underrepresented racial and ethnic groups
 - Disabilities
 - Socially, culturally, economically or educationally disadvantaged backgrounds that have inhibited ability to pursue career



NIH Extramural Loan Repayment

- Purpose: To recruit and retain highly qualified health professionals as investigators with a commitment to a research career





Loan Repayment Programs (LRP)

- Pediatric Research Loan Repayment Program
 - doctoral degree
 - pediatric-related research
- Contraception and Infertility Research Loan Repayment
 - predoctoral students, doctoral degree, nurses, PAs
 - contraception or infertility related research
 - research must be performed at qualified domestic nonprofit institution
- Clinical Research Loan Repayment Program
 - doctoral degree
 - patient-oriented research (direct patient contact)



Loan Repayment Programs (LRP)

- Health Disparities Research
 - For investigators conducting research that focuses on one or more of the minority health disparity populations defined by NIMHD and the Agency for Healthcare Research and Quality
- Clinical Research for Individuals from Disadvantaged Backgrounds
 - For clinical investigators coming from an environment that inhibited the individual from obtaining the knowledge, skill, and ability required to enroll in, and graduate from, a health professional school, or from a family with an annual income below low-income thresholds.



Loan Repayment Programs (LRP)

- Total per year is \$35,000
- NIH will offset Federal tax liability in addition to \$35,000
- This could be an additional \$11,550 (for 33% tax bracket) or \$9,800 (for 28% tax bracket)
- Total could be as much as \$46,550 per year!!
- Work/service requirement – must engage in qualified research 50% effort during contract



Loan Repayment Programs (LRP)

- GREAT program for those that want to pursue research career
- Designed for those who wish to pursue careers in biomedical, behavioral, social, and clinical research
- NOT intended to subsidize loan repayment for those pursuing private clinical practice

Other Items of Potential Interest





New NIH Biosketch

OMB No. 0925-0001/0002 (Rev. 08/12 Approved Through 8/31/2015)

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME:

eRA COMMONS USER NAME (credential, e.g., agencylogin):

POSITION TITLE:

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY

- A Personal statement**
- B Positions and honors**
- C Contributions to Science**
- D Research Support**



New NIH Biosketch:

A. Personal Statement

- Describe why you are well-suited for your role in the project:
 - Previous experimental work
 - Technical expertise
 - Past performance in this or related fields
- Up to 4 peer-reviewed publications that specifically highlight your experience and qualifications for this project
- You may consider explaining impediments to your past productivity, including factors such as family care responsibilities, illness, disability, and active duty military service.



New NIH Biosketch:

B. Positions and Honors

- List previous positions in chronological order, concluding with the present position
- List any honors, such as membership on any Federal Government public advisory committee(s)



New NIH Biosketch

C. Contribution to Science

- Up to 5 of your most significant contributions to science
 - For each one, reference up to 4 relevant, peer-reviewed publications or other non-publication research products
 - Each contribution should be no longer than ½ page, including figures and citations
- Provide URLs to the full list of your published work as found in a publicly available digital database (e.g., SciENcv, My Bibliography)



New NIH Biosketch:

D. Research Support

- List both selected ongoing and completed research projects for the past 3 years (Federal or non-Federally-supported)
- Begin with the projects that are most relevant to the research proposed in the application



Grants & Funding

[About Research Grants & Contracts, Types of Funding Announcements](#)

[Grants Process](#)

[Grant Policies & Funding Strategies](#)

[Funding Opportunities & Mechanisms](#)

[Peer Review](#)

[Contacts for NICHD Funding Information](#)

Grants & Funding

The NICHD uses a variety of mechanisms, including grants and contracts, to provide funding support for research on topics related to its mission. Select a link below for more specific information.

[About Research Grants, Contracts, & Types of Funding Announcements](#)

Learn the difference between research grants, contracts, and other funding instruments for extramural research support.

[Grants Process](#)

If you are new to the federal grants process, this section will help you find the right research program, determine the correct funding mechanism, and prepare to submit an application.

[Grant Policies & Funding Strategies](#)

These policies and strategies help guide how the NICHD handles different grants and funding issues, such as human subjects' protection, data sharing, large grants, and overall funding dollars.

[Funding Opportunities & Mechanisms](#)

Find current funding opportunity announcements (FOAs), including requests for applications (RFAs) and program announcements (PAs/PARs), requests for proposals (RFPs), notices (NOTs) of changes and guidelines, and concepts, which may turn into specific initiatives. This section also describes the mechanisms that the NICHD uses to provide extramural funding support.

[Peer Review](#)

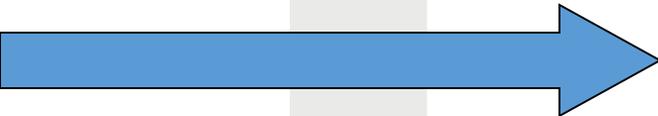
This section outlines the peer-review process at NIH and provides additional information specific to NICHD. Peer review includes review of applications by scientific review groups and study sections and evaluates and rates the scientific and technical merit of research applications.

[Contacts for NICHD Funding Information](#)

Find the right person at the NICHD to answer your application, grants, scientific, policy, and contracts questions.

Related Resources

- [Active FOAs](#)
Current funding opportunities relevant to NICHD
- [Training, Education, And CareerDevelopment](#)
Find information on intramural and extramural training
- [Application, Forms & Instructions](#)
NIH grant applications and forms
- [Funded Projects: RePORT](#)
NIH Research Portfolio Online Reporting Tool
- [Office of Extramural Policy](#)
Provides guidance on grants and FOAs
- [Find a contact in the Office of Acquisitions](#)
Provides guidance on contracts and RFPs
- [NIH Office of Extramural Research](#)
Leads NIH extramural funding and grants activities





NIH Guide for Grants and Contracts

HOME ABOUT GRANTS FUNDING FORMS & DEADLINES GRANTS POLICY NEWS & EVENTS ABOUT OER NIH HOME

Grants & Funding



Which progress report should you use?

Rock Talk
Follow @RockTalking

Chimpanzees in Biomedical Research
More on Percentiling
Update on the Physician Scientist Workforce Workgroup and More at the ACD Meeting

Latest News and Events

Info on Latest NIH RePORTER Releases
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Updated Electronic Grant Application Forms

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Electronic Research Admin

Applying Electronically

Forms & Deadlines

Forms & Applications
Due Dates & Submission Policies
Submitting Your Application

Grants Policy

Policy & Guidance
Compliance & Oversight
Research Involving Human

FUNDING
Search NIH Guide for Grants and Contracts

Search

Funding Opportunities & Notices
Unsolicited Applications (Parent Announcements)

Recovery Act	NIH Loan Repayment Programs
Research Training & Career Development	New and Early Stage Investigators
Small Business (SBIR/STTR)	Stem Cell Information
Contract Opportunities	NIH Common Fund
	OppNet (Behavioral & Social Sciences)



NIH Guide Terminology

Request for Applications (RFA)

- Identifies a more narrowly defined area for which one or more NIH institutes have set aside funds for awarding grants
- Usually has a single receipt (received on or before) date specified in the RFA announcement
- Usually reviewed by a Scientific Review Group convened by the issuing awarding component (e.g., NICHD)



NIH Guide Terminology

- Program Announcement (PA)
 - Highlights an area of interest to NIH
 - May have more than one receipt date
- Notice (NOT)
 - Announces policy and procedures, changes to RFA or PA announcements, RFPs and other general information items



Foreign Scientists Temporarily in the U.S.

- Foreign nationals temporarily in the U.S. on a visa can apply for NIH research support (e.g., R01, R03, K99/R00, P01, etc.) if they have a formal written appointment (no salary necessary) with a U.S. institution.
- Can not apply for training (F, T) or many career awards (K)
- Visa can not be extended because of the grant award



Time Line: Application to Award

- Receipt Dates
 - <http://grants.nih.gov/grants/funding/submissionschedule.htm>
- Review: 5-6 months later
- Council: 3-4 months
- Award: 1-2 months
- Total time until award:
9-10 months





Information

- NICHD: <http://www.nichd.nih.gov>
- NICHD Website: “Funding by NICHD”
 - <http://www.nichd.nih.gov/funding/funding-mechs.htm>
- NIH Website “Welcome to Extramural Research at the NIH”
 - <http://grants.nih.gov/grants/welcome.htm>
- NIH Career Award Website “K Kiosk”
 - <http://grants.nih.gov/training/careerdevelopmentawards.htm>
- NIH Peer Review Revealed: CSR videos for an inside look at how scientists from across the country review NIH grant applications for scientific and technical merit.
 - <http://cms.csr.nih.gov/ResourcesforApplicants/InsidetheNIHGrantReviewProcessVideo.htm>



Topics Covered

- Overview of Grant Mechanisms
 - Research Grants
 - Fellowships
 - Training
 - Career Development
- Supplements to existing grants
- School Loan Repayment Programs
- Additional information



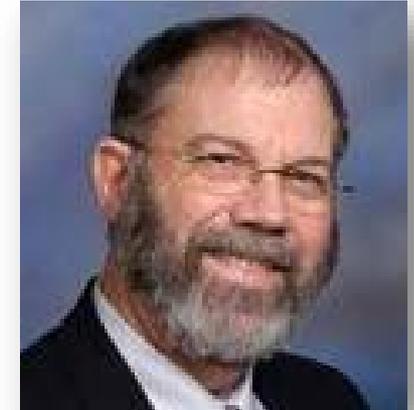
NICHD Program Staff are here to help you navigate the system!



Rosemary Higgins



Tonse Raju



Menachem Miodovnik



Lisa Halvorson



Cathy Spong



Uma Reddy