Leaping the Hurdles and Navigating the Maze: Key Information on NICHD Funding

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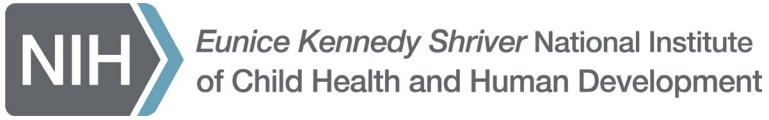
Population Dynamics Branch, NICHD

University of Washington Center for Studies in Demography and Ecology, 26 May 2021



National Institutes of Health (NIH)

- Seek fundamental knowledge about:
  - Nature and behavior of living systems
  - Application of that knowledge to
    - Enhance health
    - Lengthen life, and
    - Reduce illness and disability
- Comprises 27 Institutes and Centers, including:
  - *Eunice Kennedy Shriver* National Institute of Child Health & Human Development (NICHD)
  - Center for Scientific Review (CSR)

NICHD Mission, Vision, & Strategic Plan

Mission

NICHD leads research and training to understand human development, improve reproductive health, enhance the lives of children and adolescents, and optimize abilities for all.

Vision

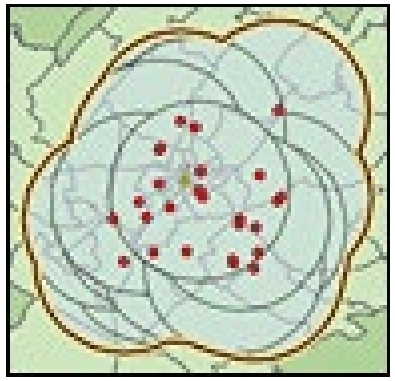
Healthy pregnancies. Healthy children. Healthy and optimal lives.

NICHD Strategic Plan

Strategic Plan Themes

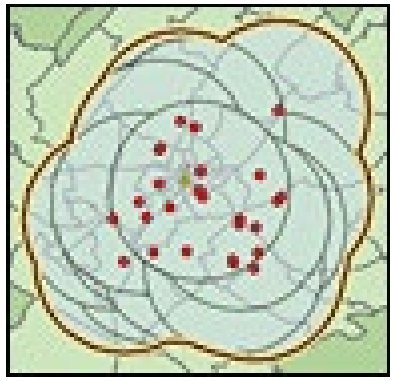
1. Understanding the Molecular, Cellular, and Structural Basis of Development
2. **Promoting Gynecologic, Andrologic, and Reproductive Health**
3. **Setting the Foundation for Healthy Pregnancies and Lifelong Wellness**
4. **Improving Child and Adolescent Health and the Transition to Adulthood**
5. Advancing Safe and Effective Therapeutics and Devices for Pregnant and Lactating Women, Children, and People with Disabilities

Population Dynamics Branch
Demography



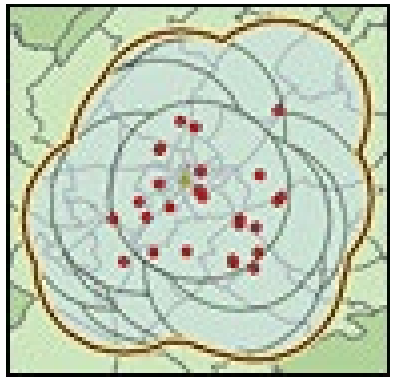
- Support research on the scientific study of human populations, including:
  - fertility, pregnancy outcomes,
  - mortality and morbidity (especially maternal, infant, child, adolescent, and young adult mortality and morbidity),
  - migration, population distribution, population stratification (including disparities based on race, ethnicity, sex/gender, and age),
  - nuptiality, family demography, population growth and decline, and the causes and consequences of demographic change

Population Dynamics Branch
Reproductive Health



- Support behavioral and social science research on family planning, infertility, and sexually transmitted infections including HIV/AIDS.

Population Dynamics Branch
Population Health



- Support research on how demographic, social, economic, institutional, geographic, and other factors influence human health, productivity, behavior, and development.
  - Emphasis on
    - Research using population-representative data and natural and policy experiments
    - Use of methods addressing selection and other sources of bias.

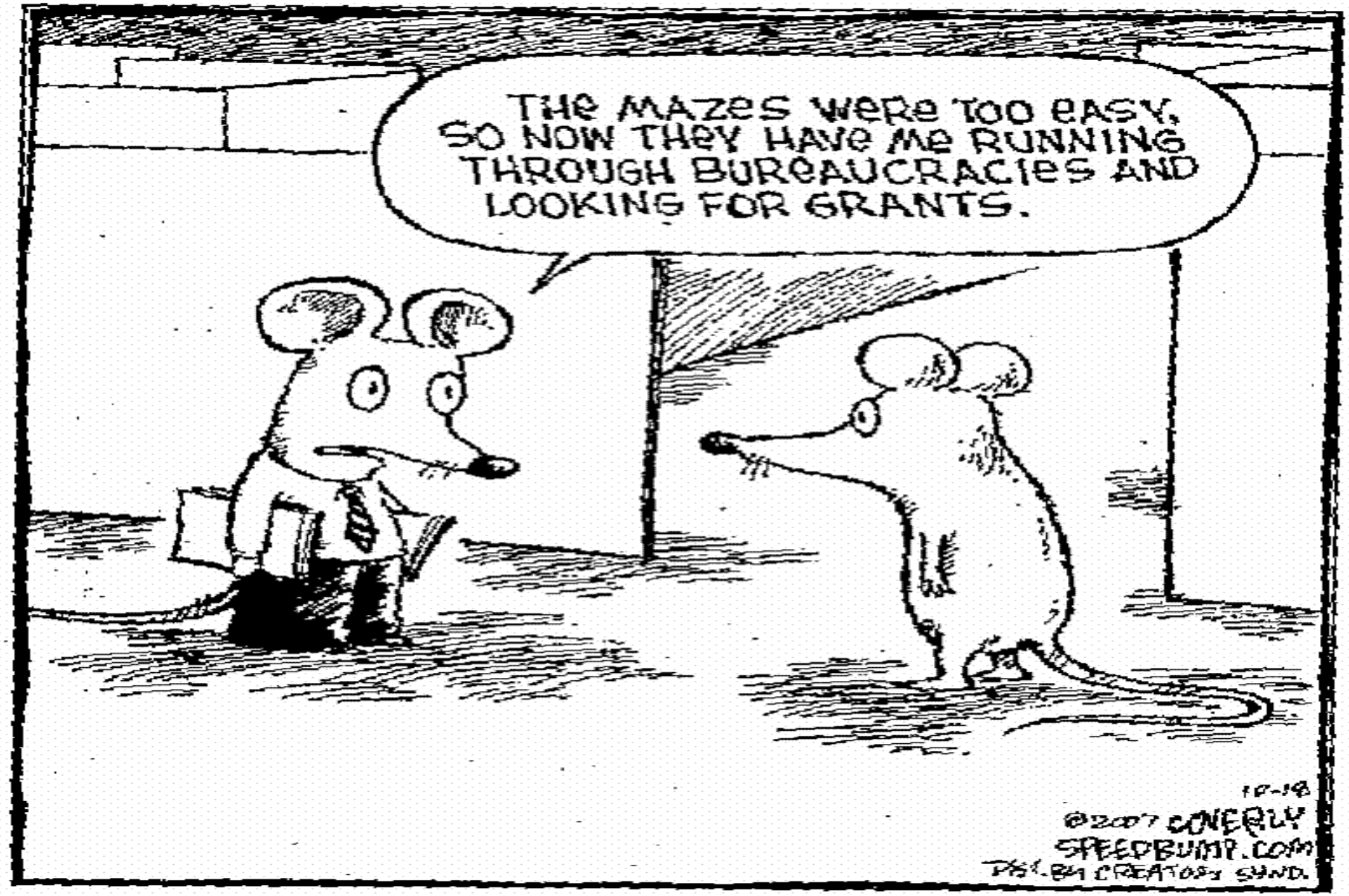
Reproductive Health Research at NICHD

NICHD Extramural Scientific Branches with Reproductive Health Portfolios

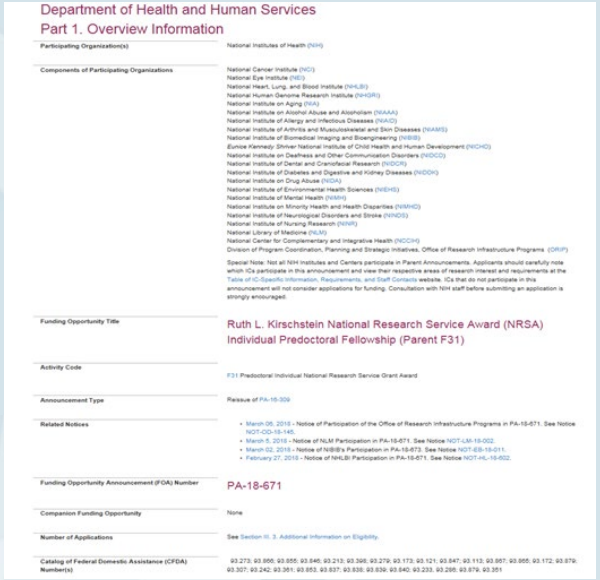
- **Population Dynamics Branch (PDB)**
- **Contraception Research Branch (CRB)**
- **Pregnancy and Perinatology Branch (PPB)**
- Fertility and Infertility Branch (FI)
- Gynecologic Health and Disease Branch (GHDB)
- Maternal and Pediatric Infectious Disease Branch (MPIDB)

Support for Research Projects

SPEED BUMP DAVE COVERLY



Funding Opportunity Announcements (FOAs)



Department of Health and Human Services
Part 1. Overview Information

Participating Organization(s)	National Institutes of Health (NIH)
Components of Participating Organizations	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) National Institute of Environmental Health Sciences (NIEHS) 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) National Center for Complementary and Integrative Health (NCCIH) Division of Program Coordination, Planning and Strategic Initiatives, Office of Research Infrastructure Programs (ORIP) Special Note: Not all NIH Institutes and Centers participate in Parent Announcements. Applicants should carefully note which ICs participate in this announcement and view their respective areas of research interest and requirements at the Table of IC-Specific Information, Requirements, and Staff Contacts website. ICs that do not participate in this announcement will not consider applications for funding. Consultation with NIH staff before submitting an application is strongly encouraged.
Funding Opportunity Title	Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship (Parent F31)
Activity Code	F31 Predoctoral Individual National Research Service Grant Award
Announcement Type	Reissue of PA-16-309
Related Notices	• March 06, 2018 - Notice of Participation of the Office of Research Infrastructure Programs in PA-18-671. See Notice NOT-OD-18-145. • March 5, 2018 - Notice of NLM Participation in PA-18-671. See Notice NOT-LM-18-002. • March 02, 2018 - Notice of NIBIB's Participation in PA-18-672. See Notice NOT-EB-18-011. • February 27, 2018 - Notice of NHLBI Participation in PA-18-671. See Notice NOT-HL-18-602.
Funding Opportunity Announcement (FOA) Number	PA-18-671
Companion Funding Opportunity	None
Number of Applications	See Section III. 3. Additional Information on Eligibility.
Catalog of Federal Domestic Assistance (CFDA) Number(s)	93.273; 93.866; 93.855; 93.846; 93.213; 93.398; 93.279; 93.173; 93.121; 93.847; 93.113; 93.867; 93.855; 93.172; 93.879; 93.307; 93.242; 93.361; 93.853; 93.837; 93.838; 93.839; 93.840; 93.233; 93.286; 93.879; 93.351

- **Find FOAs in the NIH Guide for Grants and Contracts:**
  http://grants.nih.gov/grants/guide/index.html
  http://obssr.od.nih.gov/funding_opportunities/BSSR_guide_to_grants_at_the_NIH/guideIndex.aspx
  - Parent Announcements: allow investigator-initiated applications; many ICs participate
  - Program Announcements (PAs and PARs):
    - Highlight areas of programmatic scientific interest; issued by one or more ICs
    - Being replaced by Notices of Special Interest (NOSIs)
  - Requests for Applications (RFAs):
    - Focused on specific program objectives and highlight defined areas of scientific interest; issued by one or more ICs
    - Include set-aside aside funds, reviewed by a study section specially convened to review the RFA

Responsiveness vs. Program Priority

- Responsiveness only applies to RFAs.
  - Program staff check for fulfillment of technical and scientific requirements in the FOA.
  - Not related to the scientific merit of application.
- Program priority applies to all FOAs.
  - Explicit component of second level of review.
- Review panels do not FUND applications. Funding decisions are made by program staff and institute leadership

Support for Individual Research and Training

Research Grants

- R01 Research Project Grants
- R03 Small Research Grants
- R21 Exploratory/Developmental Research Grants

Training & Career Development

- K01 Mentored Population Research Scientist Development Awards
- K99/R00 Pathway to Independence Awards
- K23 Mentored Patient-oriented Awards
- F30 Pre-doctoral Dual Degree Fellowships
- F31 Pre-doctoral Fellowships
- F32 Postdoctoral Fellowships

Individual Training and Career Development Awards by Career Stage

*K award eligibility varies by mechanism and I/C

^Postdoctoral fellows are eligible for R03, R21, and R01 awards

https://researchtraining.nih.gov/

Application Requirements Vary by Mechanism

Funding Limits

Limits	R01	R21	R03
Time	5 years	2 years	2 years
Funding cap (Direct Costs)	$500k/yr	$200k/yr $275k total	$50k/yr
Research Plan page limits	12	6	6
Renewable?	Yes	No	No

Receipt Dates

Mechanism	Receipt Dates		
	Cycle I	Cycle II	Cycle III
R01s			
New	5-Feb	5-Jun	5-Oct
Renewal, resubmission, revision	5-Mar	5-Jul	5-Nov
K (career) awards			
New	12-Feb	12-Jun	12-Oct
Renewal, resubmission, revision	12-Mar	12-Jul	12-Nov
R03s, R21s, and similar			
New	16-Feb	16-Jun	16-Oct
Renewal, resubmission, revision	16-Mar	16-Jul	16-Nov
F (fellowship) awards	8-Apr	8-Aug	8-Dec
AIDS and AIDS-related (most)	7-May	7-Sep	7-Jan

https://grants.nih.gov/grants/funding/funding_program.htm#RSeries

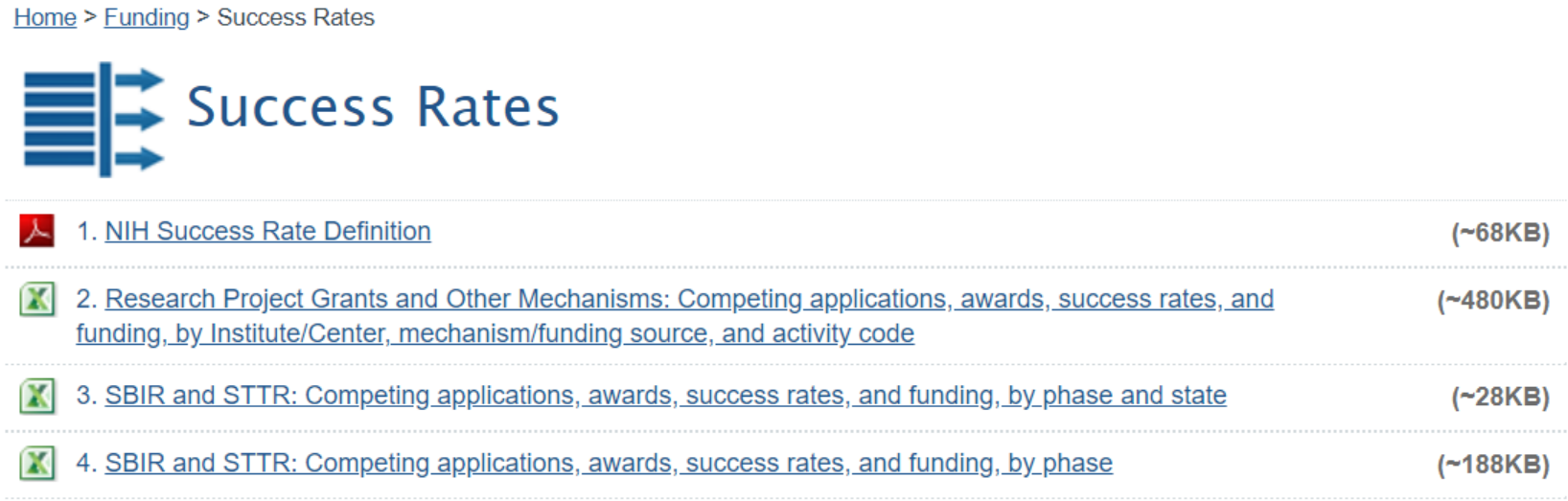
What NIH Currently Funds

http://projectreporter.nih.gov/reporte

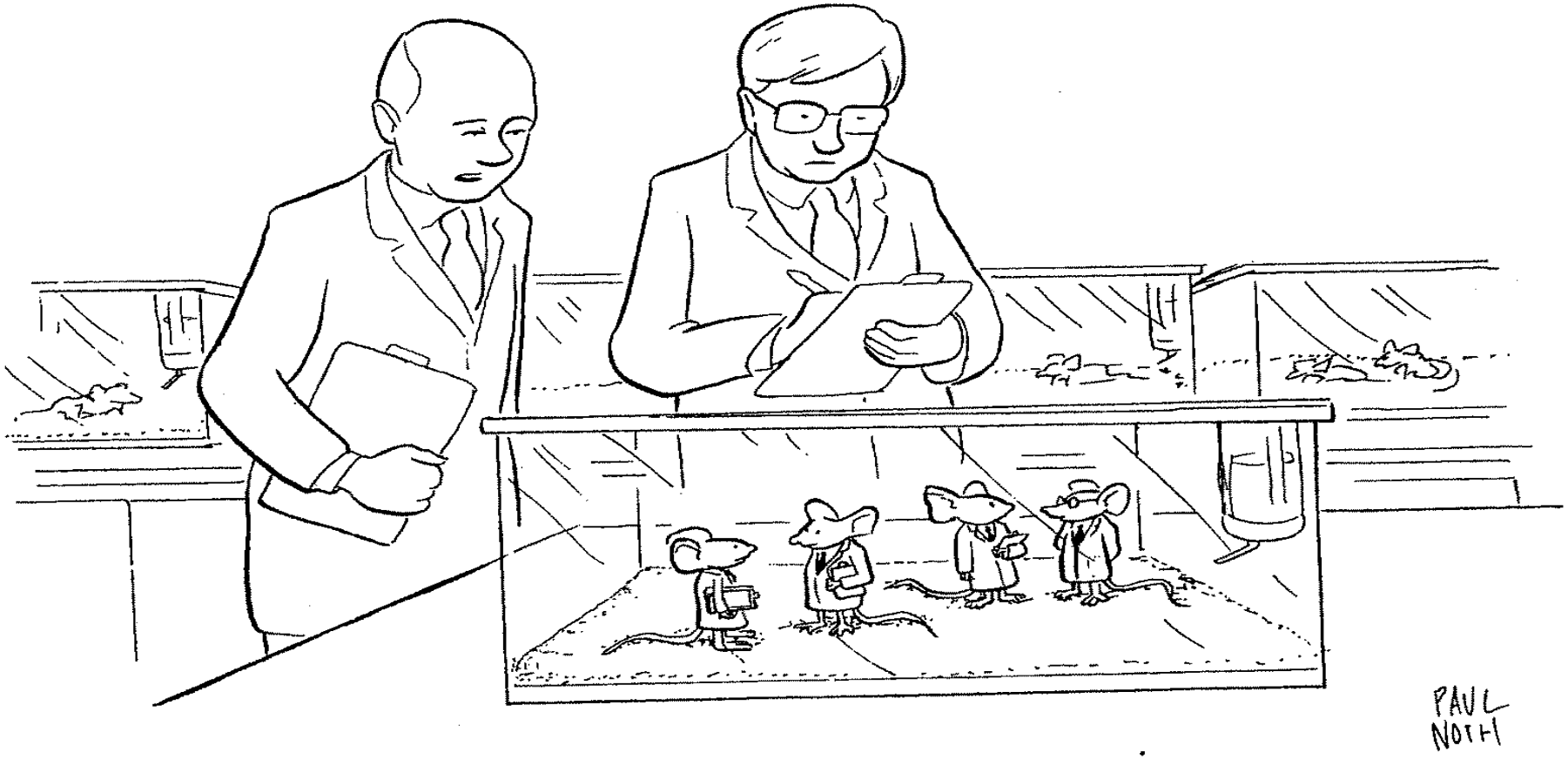
- Find out what NIH has or is currently funding in your area of science.
- The information found in RePORTER is drawn from several extant databases–eRA databases, Medline, PubMed Central, the NIH Intramural Database, and iEdison–using newly-formed linkages among these disparate data sources.

Success Rates

- https://report.nih.gov/success_rates/



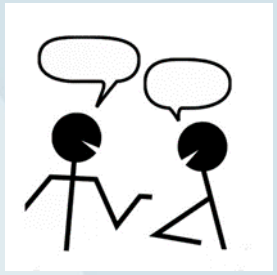
The Application and Review Process



"O.K., let's slowly lower in the grant money."

NIH Staff:

Who, what, where, when?



Program Official (PO)

- What: Contact for scientific consultation and guidance
- Where: Funding Institute (e.g., NICHD, NIA, NIMHD)
- When: Before submission and after the review meeting

Scientific Review Officer (SRO)

- What: Manages the review of applications, organizes scientific review groups (a.k.a, SRGs or study sections)
- Where: CSR or review branch of an Institute
- When: After submission and prior to the review meeting.

Grants Management Specialist (GMS)

- What: Handles financial and administrative issues related to awarding grants
- Where: Funding Institute (same as PO)
- When: Before grant application is awarded, when progress reports submitted…

Grants Process

Investigator

Develops Research Idea

Conducts Research

Allocates Funds

School or Other Research Center

Submits Application

GRANTS.GOV/NIH

Center for Scientific Review (CSR)

Assigns to IRG/study section & IC

Study Section

Evaluates for scientific merit

Institute

Evaluates for programmatic relevance

Advisory Councils & Boards

Recommends concurrence with Program recommendations

Institute Director

Approves proposed “pay lists”

Review Location

- R01 and R21 grant applications reviewed by CSR review panels with broad substantive foci: https://public.csr.nih.gov/StudySections.
- R03 grant applications reviewed either by CSR review panels or IC-specific panels.
- Applications submitted in response to RFAs reviewed within Special Emphasis Panel recruited specifically for that FOA.

Center for Scientific Review (CSR)

- CSR handles the review of ~ 70% of the grant applications that NIH receives.
- Organized into Integrated Review Groups (IRGs) which represent a cluster of study sections in a general scientific area.
- Applications are generally assigned first to an IRG, and then to a specific study section within that IRG for evaluation of scientific merit.

Population Sciences and Epidemiology IRG

Study Sections

Behavioral Genetics and Epidemiology Study Section	BGES
Biostatistical Methods and Research Design Study Section	BMRD
Cancer, Heart, and Sleep Epidemiology Study Sections	CHSA & CHSB
Infectious, Reproductive, Asthma and Pulmonary Conditions Study Section	IRAP
Kidney, Nutrition, Obesity and Diabetes Study Study Section	KNOD
Neurological, Aging and Musculoskeletal Epidemiology Study Section	NAME
Social Sciences and Population Studies Study Section	SSPA & SSPB
Fellowships: Epidemiology and Population Sciences	F18

Review and Program are not equivalent

- Review panels cover applications assigned to multiple institutes or multiple branches within an institute.
- Program portfolios include applications being reviewed in multiple review panels.
- Review panels are not instructed to consider the programmatic perspective; they do not fund applications.

Before You Submit, Check…

- That you have downloaded the most recent Funding Opportunity Announcement (FOA)
- Allowability of foreign applicants/components
- Not all institutes use the Parent Announcements:

  NIH Small Research Grant Program (Parent R03 Clinical Trial Not Allowed)

  NICHD Small Research Grant Program (R03 Clinical Trial Required)

  NICHD Small Research Grant Program (R03 Basic Experimental Studies with Humans Required)

For example …

Department of Health and Human Services

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Note: Not all NIH Institutes and Centers (ICs) participate in Parent Announcements. Applicants should carefully note which ICs participate in this announcement and view their respective areas of research interest at the R03 IC-Specific Scientific Interests and Contact website.

ICs that do not participate in this announcement will not consider applications for funding.

For example …

Section III. Eligibility Information

Foreign Institutions

Non-domestic (non-U.S.) Entities (Foreign Institutions) **are** eligible to apply.

Non-domestic (non-U.S.) components of U.S. Organizations **are** eligible to apply.

Foreign components, as defined in the *NIH Grants Policy Statement*, **are** allowed.

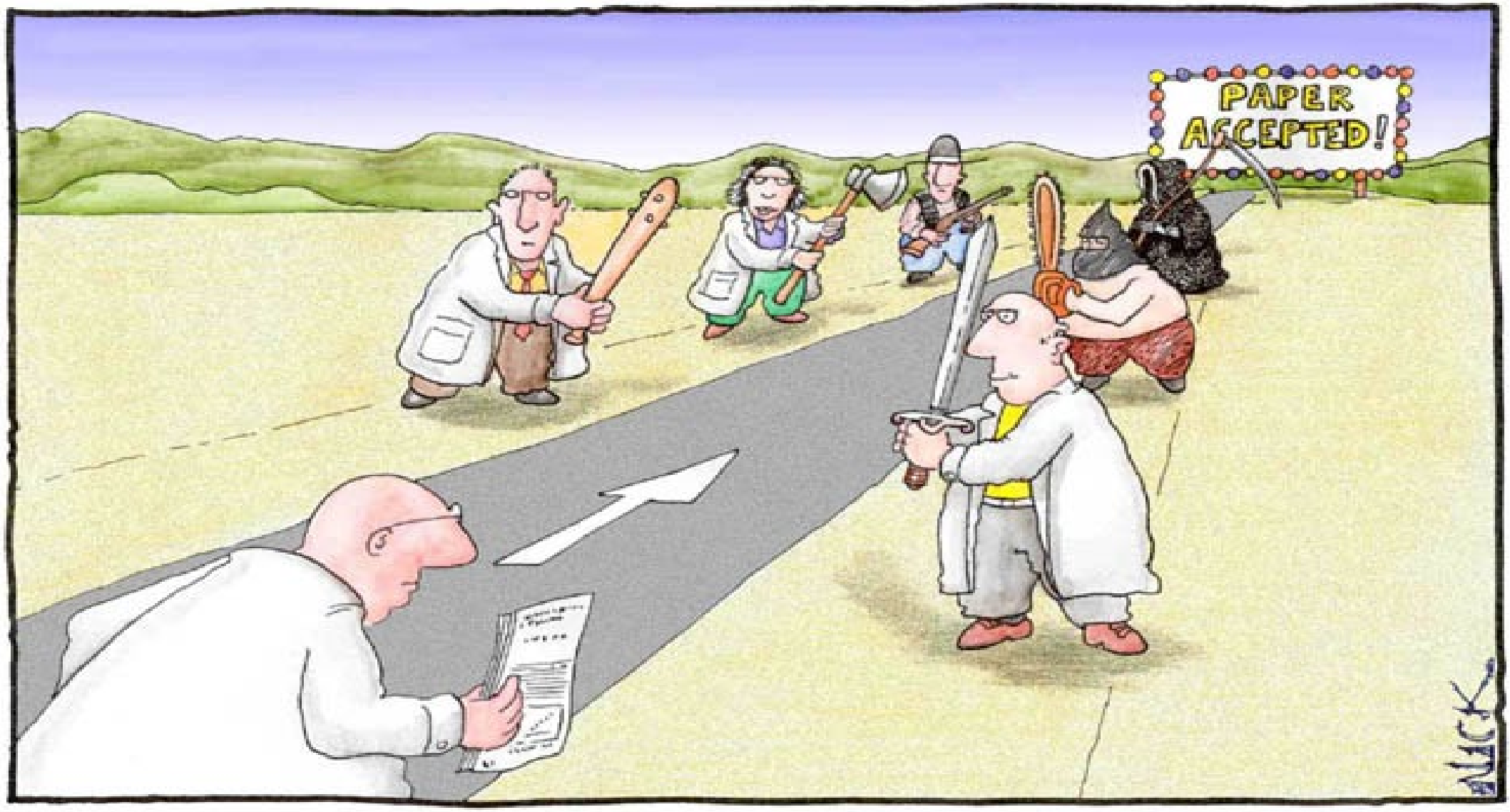
Once you've submitted…

Do not just submit your application to your sponsored projects office and walk away from your electronic submission:

- Check eRA Commons for errors and warnings.
- Check assignments for Review and Program and make immediate contact if you don't agree.

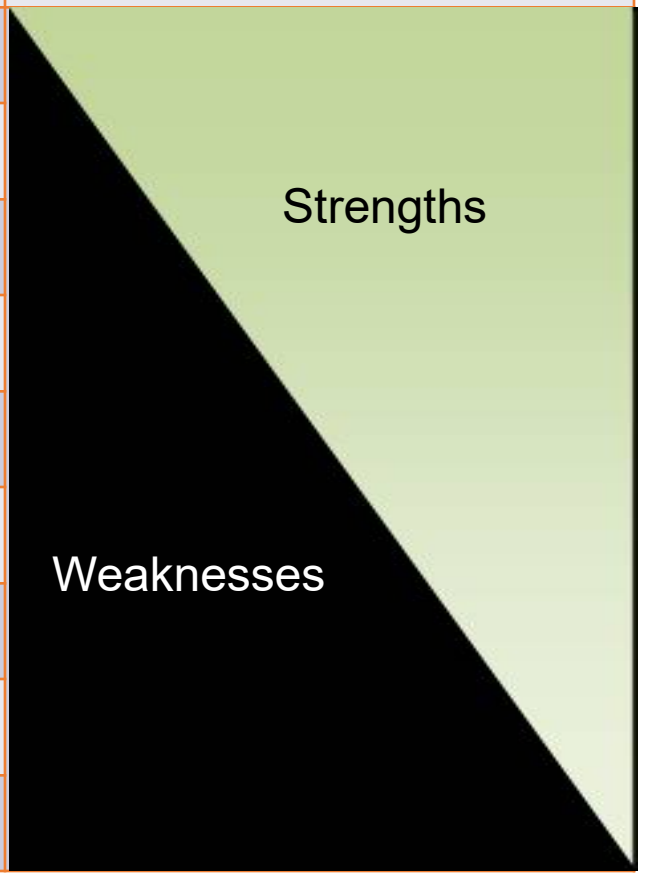
Failure to follow instructions is NOT an acceptable

reason for a late application.



Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

Scoring System

Impact	Score	Descriptor	Strengths/Weaknesses
High Impact	1	Exceptional	
	2	Outstanding	
	3	Excellent	
Moderate Impact	4	Very Good	
	5	Good	
	6	Satisfactory	
Low Impact	7	Fair	
	8	Marginal	
	9	Poor	

Review Criteria are Public

- https://grants.nih.gov/grants/peer/critiques/rpg.htm
- R01, R03, R21, R34
  - Overall Impact: likelihood for the project to exert a sustained, powerful influence on the research field(s) involved
  - Protection of Human Subjects
  - Inclusion of Women, Minorities, and Children
  - Resource Sharing Plans

What do the scores mean?

- Overall Impact Score is not the mean of the five criterion scores!
- Lower is better. Most investigator-initiated applications are percentiled; most RFAs are not.
- Not discussed – triage of applications in the lower half … not a death sentence.

What Never Changes

- Need an important question to answer.
- Need a good strategy to answer question.
- Reviewers need to be able to understand:
  - WHAT you want to do
  - WHY it is important (your project, not the issue)
  - WHO -- if YOU are able to do it
- Need to have a clear and logical flow:
  Aims > Who you are > How this training leads to aims

What has Changed Greatly

- NIH's Definition of a Clinical Trial https://grants.nih.gov/policy/clinical-trials/definition.htm
- NIH Public Access Policy https://publicaccess.nih.gov/
- NIH Human Subjects System https://era.nih.gov/help-tutorials/hss?q=hss_overview.cfm

Web sites that help…

- NIH Guide for Grants and Contracts http://grants.nih.gov/grants/guide/index.html
- Electronic Submission of Grant Applications http://era.nih.gov/ElectronicReceipt/
- NIAID web site with tutorials & sample applications & summary statements http://www.niaid.nih.gov/ncn/grants/default.htm

Contact A Program Official

- Use e-mail!
  - We run around a lot
  - We can forward you to the right person
  - Gives us time to research your question
- Tell us if you are contacting multiple POs.
  - Minimize duplication of effort and maximize how many PIs we can help
  - Co-funding is rare; funding limits vary by IC for some mechanisms

Tracking Federal R&D Funding

- In the immortal words of School House Rock, “Knowledge is power.”

- http://www.populationassociation.org/government-affairs/
- https://www.aaas.org/focus-areas/federal-science-budget-analysis

I can play guitar - but I can't really. I wouldn't say I'm talented at it. I just kind of watch videos on YouTube, and I follow the instructions... OK, yeah, my hidden talent: I'm good at following instructions!

- Chloe Kim, Olympic gold medalist

Thank you for your attention.

Questions?