



University  
of Idaho

*Zoom participants: Please  
keep your microphone muted  
until the Q&A session*

# NIH FUNDING MECHANISMS OVERVIEW (R03, R01, R21)

## RESEARCH AND FACULTY DEVELOPMENT FACULTY SUCCESS SEMINAR SERIES

Carly Cummings, PhD, CPRA  
Director, Research and Faculty Development

Special Guest: Deborah Stenkamp, PhD  
Professor, Biological Sciences

*Please note that this session is being recorded*

# OFFICE OF RESEARCH AND FACULTY DEVELOPMENT (RFD)

I We provide proposal development assistance across the spectrum\*



I Meet goals in the UI strategic plan – grow research and creative efforts across all disciplines

I Reach out to request service – [uidaho.edu/orfd](http://uidaho.edu/orfd)

\*Not including budget preparation

*All services are optional and are granted on a first come, first served basis*

# OFFICE OF RESEARCH AND FACULTY DEVELOPMENT (RFD)



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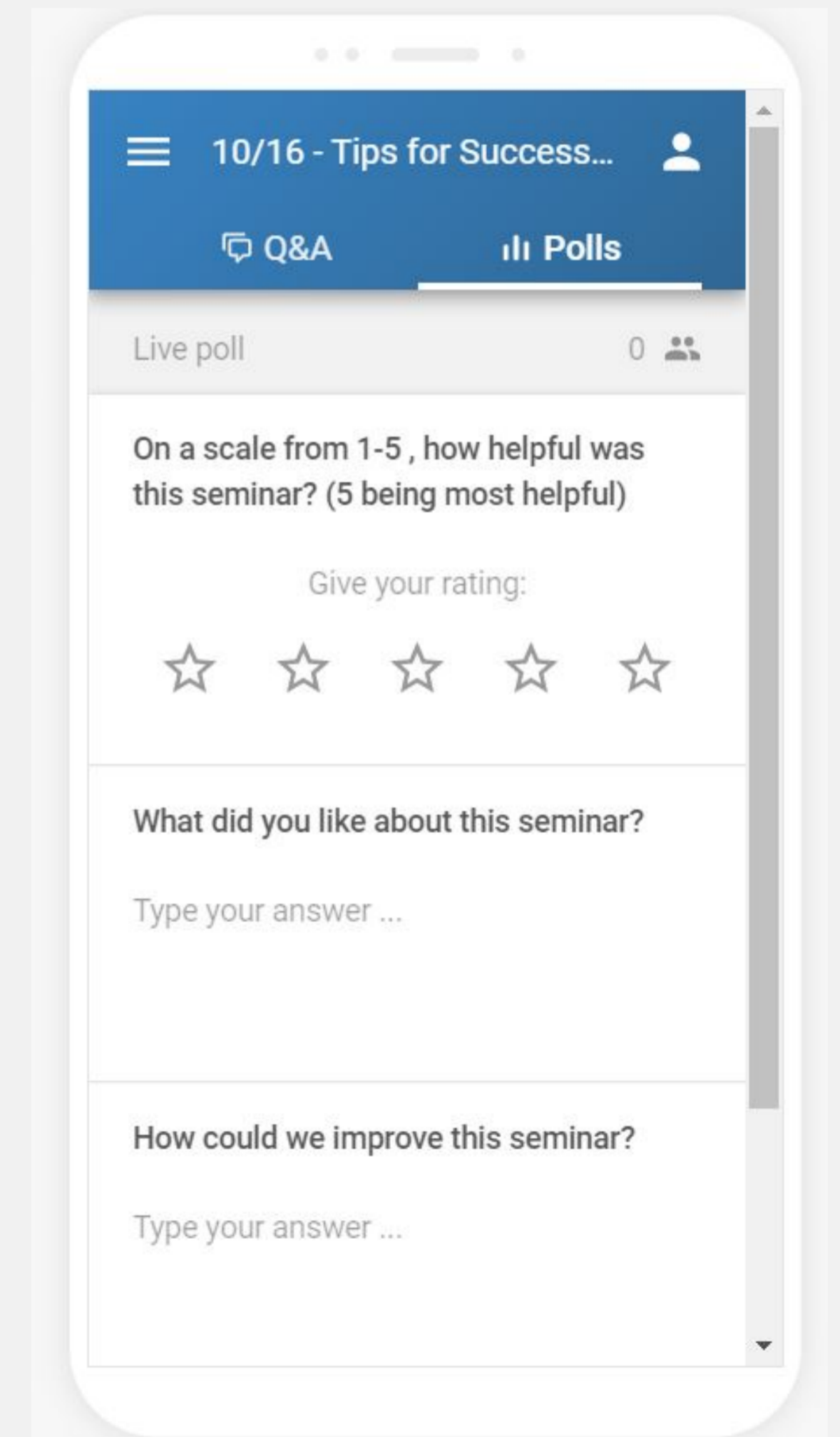
[josborne@uidaho.edu](mailto:josborne@uidaho.edu)

Morrill Hall  
Room 103 – come say hello!

# HELP US IMPROVE OUR SEMINARS

- I After the Q&A session: brief 3 question sli.do poll
- *On a scale from 1-5, how helpful was this seminar?*
  - *What did you like most about this seminar?*
  - *How can we improve this seminar?*

[www.slido.com](http://www.slido.com) or use the **sli.do** app (Use code #FSS)





# AUDIENCE POLL

**I** Proposal submission to NIH?

**I** R03? R21? R01?



# NATIONAL INSTITUTES OF HEALTH

- I Federal funding agency
- I Part of the U. S. Department of Health and Human Services (HHS)
- I Began in 1887 as a one-room laboratory in Marine Hospital Services
- I Director: Francis S. Collins, MD, PhD (since 2009)
- I 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.

# ORGANIZATION



**I** NIH divided into 27 Institutes/Centers (I/C) → Study Sections → Research funding mechanisms (R)

NIH Regional Grants Conference  
- Spring and Fall

**NIH** National Institutes of Health  
*Turning Discovery Into Health*

Search NIH

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Health Information | Grants & Funding | News & Events | Research & Training | **Institutes at NIH** | About NIH

Home » Institutes at NIH

## INSTITUTES, CENTERS, AND OFFICES

**Institutes at NIH**

List of NIH Institutes, Centers, and Offices

Directors of NIH Institutes and Centers

NIH Institute and Center Contact Information

NIH Office of the Director

### List of NIH Institutes, Centers, and Offices

### NIH Offices

**NIH Office of the Director (OD)**

The Office of the Director is the central office at NIH for its 27 Institutes and Centers. The OD is responsible for setting policy for NIH and for planning, managing, and coordinating the programs and activities of all the NIH components. OD program offices include the Office of AIDS Research and the Office of Research on Women's Health, among others.

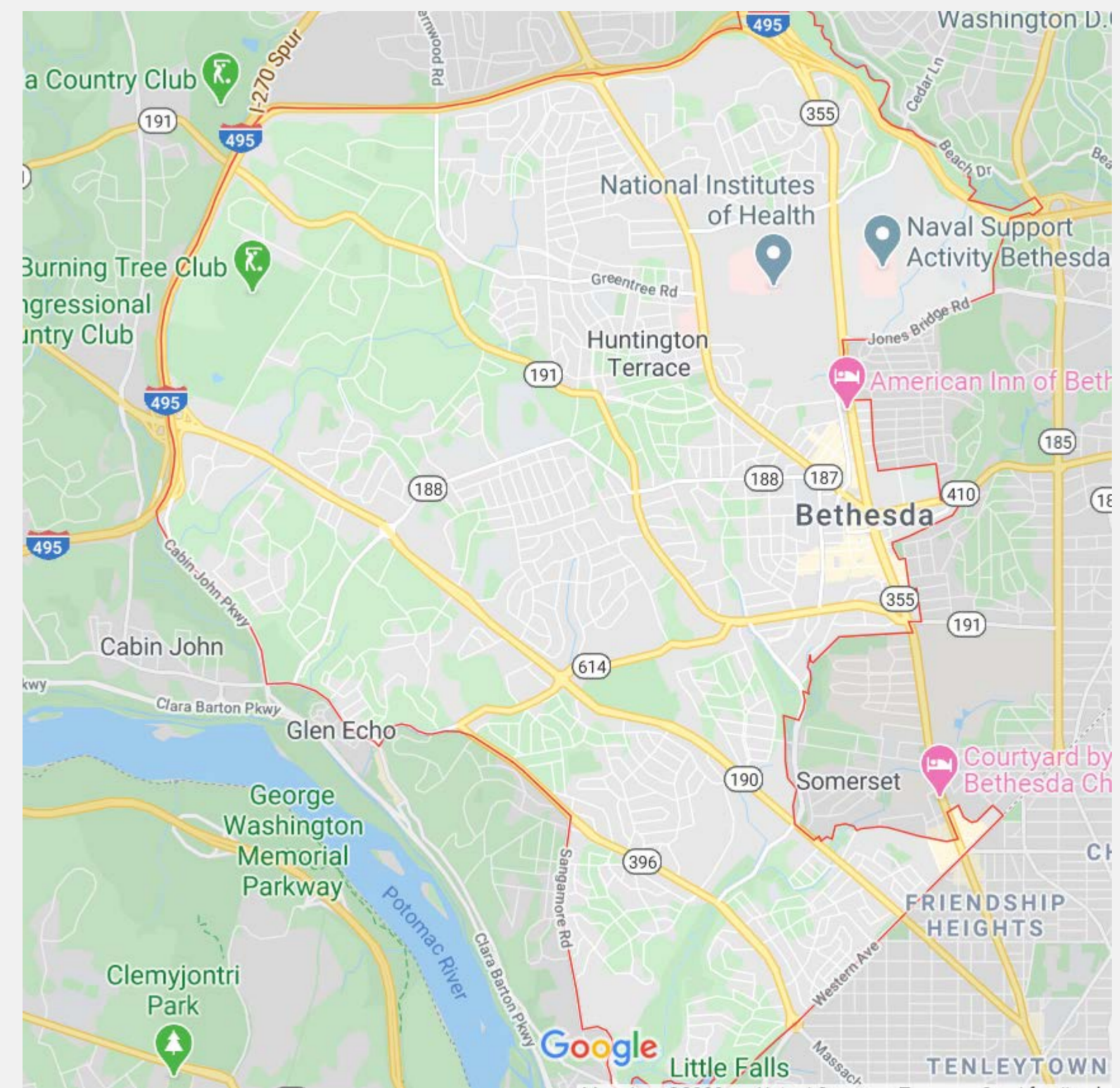
#### Quick Links

NCI	NEI	NHLBI
NHGRI	NIA	NIAAA
NIAID	NIAMS	NIBIB
NICHD	NIDCD	NIDCR
NIDDK	NIDA	NIEHS
NIGMS	NIMH	NIMHD
NINDS	NINR	NLM
CC	CIT	CSR
FIC	NCATS	NCCIH
OD		



# NATIONAL INSTITUTES OF HEALTH

- I Located in Bethesda, Maryland
- I Campus >300 acres
- I >75 buildings ([photos](#))
- I Intramural research program
- I 80% research activities outside NIH







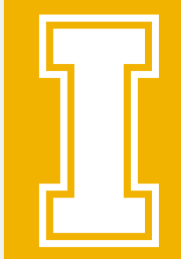
# R FUNDING MECHANISMS

- I Funding Opportunity Announcement (FOA)/ Parent Announcements (PA)
  - More about this naming [here](#)
- I Not all Institutes/Centers (I/C) participate in all PA/FOAs
- I R03: NIH Small Grant Program
- I R21: NIH Exploratory/Developmental Research Grant Award
- I R01: NIH Research Project Grant Program
- I R15: UI not eligible to apply



# R03

- I** Provides *limited funding* for a *short period of time* to support a variety of types of projects, including: pilot or feasibility studies, collection of preliminary data, secondary analysis of existing data, small, self-contained research projects, development of new research technology, etc.
  - 2 years of funding
  - Direct costs generally up to \$50,000 per year (NIH caps do not include F&A)
- I** Not renewable
- I** Utilized by >50% of the NIH ICs
- I** See parent FOA: [PA-19-052](#)
  - 19: Year of PA release; 052: serial number



# R03

## Department of Health and Human Services Part 1. Overview Information

**Participating Organization(s)**

National Institutes of Health (NIH)

**Components of Participating Organizations**

- 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 Biomedical Imaging and Bioengineering (NIBIB)
- National Institute on Drug Abuse (NIDA)
- National Institute of Environmental Health Sciences (NIEHS)
- National Institute of Mental Health (NIMH)
- National Institute of Neurological Disorders and Stroke (NINDS)

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.

**Funding Opportunity Title**

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

**Activity Code**

R03 Small Grant Program

**Announcement Type**

Reissue of [PA-18-488](#)



# R21

- I Encourages *new, exploratory and developmental* research projects by providing support for the *early stages of project development*. Sometimes used for pilot and feasibility studies.
- I Typically up to 2 years of funding
- I Direct costs generally do not exceed \$275,000
- I No preliminary data is generally required (**more on this later**)
- I Most ICs utilize
- I See parent FOA: [PA-19-053](#)



# R21

## Department of Health and Human Services Part 1. Overview Information

Participating Organization(s)

National Institutes of Health (NIH)

Components of Participating Organizations

- National Eye Institute (NEI)
- 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 on Deafness and Other Communication Disorders (NIDCD)
- National Institute of Dental and Craniofacial Research (NIDCR)
- National Institute on Drug Abuse (NIDA)
- National Institute of Environmental Health Sciences (NIEHS)
- National Institute of Nursing Research (NINR)
- National Institute on Minority Health and Health Disparities (NIMHD)
- National Library of Medicine (NLM)
- National Center for Complementary and Integrative Health (NCCIH)

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 [R21 IC-Specific Scientific Interests and Contact](#) website. ICs that do not participate in this announcement will not consider applications for funding.

Funding Opportunity Title

### NIH Exploratory/Developmental Research Grant Program (Parent R21 Clinical Trial Not Allowed)

Activity Code

R21 Exploratory/Developmental Research Grant

Announcement Type

Reissue of [PA-18-489](#)



# R01

- I NIH's most commonly used grant program
- I Used to support a discrete, specified, circumscribed research project
- I No specific dollar limit unless specified in FOA
  - Advance permission required for \$500K or more (direct costs) in any year (typical practice; not just for R01)
- I Generally awarded for 3 -5 years
- I Utilized by **all ICs**
- I See parent FOA: [PA-19-056](#)



# NIH STANDARD DEADLINES

- I** Three cycles per calendar year
- I** Dates vary for activity codes and if the submission is a new, renewal, or resubmission ([Table](#))
  - R01 new: Feb. 5, June 5, Oct. 5
  - R01 resubmission, renewal, revision: Mar. 5, July 5, Nov. 5
  - R03 and R21 new: Feb. 16, June 16, Oct. 16
  - R03 and R21 resubmission, revision (not renewable): Mar. 16, July 16, Nov. 16



# CONSIDERATIONS FOR R21 AND R03

**I** R21 and R03 are small, but not easy to get

- Competitive peer review
- No advantage for early or new investigators during peer review unlike R01 peer review (payline, expectations)
  - New: not substantial independent NIH funding (R03 and R21 OK)
  - Early-stage: new *and* within 10 years of terminal research degree

**I** Not necessarily a starting place for future R01 submission

- established investigators who want to complete a limited project
- Not designed to help establish a research career





# CONSIDERATIONS FOR R21 AND R03

- I Shorter Research Strategy (6-page v. 12-page for R01) = tightly focused research plan
- I Preliminary data are not required for R21...
  - However, they correlate with funding success = reviewer expectations
- I Is a 2-year award sufficient to complete a project to generate necessary preliminary data for R01?
  - Consider ~9 months to receive review outcome; additional time for award
- I If you have sufficient preliminary data, submitting a competitive R01 may be the better option



# COMPARING R21 AND R01



Characteristic	Parent R21	Parent R01
<b>Purpose</b>	To introduce novel scientific ideas, model systems, tools, agents, targets, and technologies that have the potential to substantially advance biomedical research.	To support a discrete, specified, circumscribed project...in an area representing the investigator's specific interest and competencies, based on NIH's mission.
<b>Duration</b>	Up to two years.	Up to five years.
<b>Budget</b>	Up to \$275,000 in direct costs over two years. At most \$200,000 for any year.	Unlimited. (But note that most new investigators submit a modular grant of \$250,000 or less.)
<b>Renewal</b>	No.	Yes, as a renewal application.
<b>Preliminary data</b>	Not required, but <a href="#">read Know the Importance of Preliminary Data for R21.</a>	Required.
<b>Participation</b>	For a list of participating institutes and centers (ICs), see the parent R21 announcements on our <a href="#">Funding Opportunity Announcements</a> page.	Most NIH ICs. For a list of participating ICs, see the parent R01 announcements on our <a href="#">Funding Opportunity Announcements</a> page.
<b>New Investigator benefits</b>	None.	Higher payline than non-new PIs, lower reviewer expectations, and other benefits.



# PROGRAM SPECIFIC R21 - EXAMPLE

**I** National Institute of Biomedical Imaging and Bioengineering (NIBIB) Trailblazer Award for **New and Early Stage Investigators** (R21)

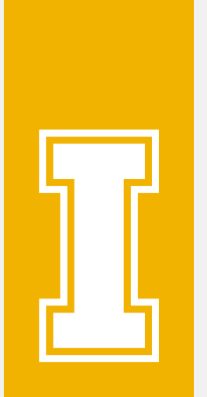
- A distinct feature for this FOA is that no preliminary data are required, expected, or encouraged.
- However, if available, minimal preliminary data are allowed. All preliminary data should be clearly marked and limited to one-half page, which may include one figure. Applications including data more than one-half page or more than one figure will be considered noncompliant with the FOA instructions and will not go forward to review.



# ASK BEFORE ASSUMING

- I** Talk with funded colleagues/mentors
- I** Contact an NIH Program Official before beginning to write
  - Identify the appropriate I/C, study section, and funding mechanism
  - Use MatchMaker tool within NIH REPORTER
  - Research and Faculty Development team can help

**REQUEST RFD SERVICES**



# NIH AWARD DATA: MATCHMAKER

[https://projectreporter.nih.gov/reporter\\_matchmaker.cfm](https://projectreporter.nih.gov/reporter_matchmaker.cfm)

U.S. Department of Health & Human Services

NIH Research Portfolio Online Reporting Tools (RePORT)

Search

HOME | ABOUT RePORT | FAQs | GLOSSARY | CONTACT US

QUICK LINKS RESEARCH ORGANIZATIONS WORKFORCE FUNDING REPORTS LINKS & DATA

Home > RePORTER > Matchmaker

NIH RePORTER Version: 7.40.0

QUERY BROWSE NIH **MATCHMAKER** SEARCH PUBLICATIONS BETA

Use Matchmaker to find similar projects and program officials

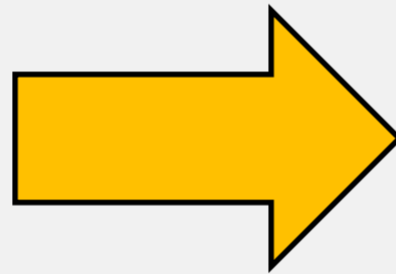
Enter abstracts or other scientific text and Matchmaker will return lists of similar projects from RePORTER or program officials associated with those projects. These matches are based on the terms and concepts used in the submitted text. Up to 15,000 characters are permitted. Matchmaker summarizes the projects by the program official, institute or center, review panel, and activity code.

Enter your Text:

VIEW TUTORIAL

Terms will be weighted by frequency of appearance in the text above. The process is automated and confidential. The Matchmaker system does not track and store submitted text. Characters left: 15000

CLEAR SIMILAR PROJECTS SIMILAR PROGRAM OFFICIALS



Matchmaker Results

Matchmaker New Query

Export All Projects GO

PROJECTS **PROGRAM OFFICIAL**

Matching Text: Endocrine regulation of multichromatic color vision Robert D. Mackin, a Ruth A. Frey, a Carmina Gutierrez, a A. A. Farre, a Shoji Kawamura, b Diana M. Mitchell, a and Deborah L. Stenkampa, 1 Primate and fish genomes contain tandemly replicated cone opsin genes. The human long wavelength-sensitive/medium wavelength-sensitive (LWS) tandem array underlies trichromatic color vision; mutations in this array cause altered color vision and retinal degenerations. Differential expression of human LWS vs. MWS is considered a stochastic event, whereby upstream enhancers associate with the promoter of the proximal or distal gene. We demonstrate that the endocrine thyroid hormone (TH) is a potent endogenous regulator of the orthologous zebrafish *lws1/lws2* array, and of tandemly quadruplicated *rh2-1/rh2-2/rh2-3/rh2-4* array. TH promotes shifts in spectral sensitivity to longer wavelengths by changing expression of opsins in each array, indicating TH-coordinated control of visual function.

Characters left: 414

Fiscal Year (FY) Active Projects SELECT Exclude Subprojects?

105 Program Officials from the matched projects. (500 projects maximum)

Click on chart labels to filter search results by the Institute/Center or Activity Code

Click here to view detailed Charts

INSTITUTE/CENTER

Institute/Center	Program Official
NIGMS	16
NHLBI	14
NIDDK	11
NEI	10
NICHD	9
NINDS	6

ACTIVITY CODE

Activity Code	Program Official
R01	50
R21	20
R15	15
R00	10
F31	8
F32	5

Click on the column header to sort the results

Records per page 25

1 2 3 4 5 1 of 5 Next Last

Program Official	IC	Contact Information	Projects
<a href="#">GREENWELL, THOMAS</a>	NEI	<a href="#">Click to view PO email address</a>	98
<a href="#">NEUHOLD, LISA</a>	NEI	<a href="#">Click to view PO email address</a>	83
<a href="#">SHEN, GRACE L</a>	NEI	<a href="#">Click to view PO email address</a>	32
<a href="#">AGARWAL, NEERAJ</a>	NEI	<a href="#">Click to view PO email address</a>	30
<a href="#">HOODBHOY, TANYA</a>	NIGMS	<a href="#">Click to view PO email address</a>	16
<a href="#">WIGGS, CHERI</a>	NEI	<a href="#">Click to view PO email address</a>	8
<a href="#">STEIN, KATHRYN K</a>	NIDCR	<a href="#">Click to view PO email address</a>	8
<a href="#">TOYAMA, REIKO</a>	NICHD	<a href="#">Click to view PO email address</a>	7
<a href="#">MUKHOPADHYAY, MAHUA</a>	NICHD	<a href="#">Click to view PO email address</a>	6
<a href="#">SILVA, CORINNE M</a>	NIDDK	<a href="#">Click to view PO email address</a>	6
<a href="#">FLANDERS, MARTHA C</a>	NEI	<a href="#">Click to view PO email address</a>	6
<a href="#">WUJEK, JEROME R</a>	NEI	<a href="#">Click to view PO email address</a>	5

Enter ~6 pages of single-spaced text

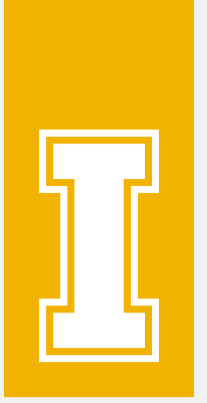


# TOOLS/RESOURCES

- I To see the types of projects that have been funded, go to [NIH RePORTER](#) and select the specific Activity Code
  - MyRePORTER Video [Tutorial](#) (6:35)



# NIH REPORTER



SUBMIT QUERY CLEAR QUERY

Fiscal Year (FY): Active Projects SELECT  
Current FY is 2020

### RESEARCHER AND ORGANIZATION

Principal Investigator (PI) / Project Leader:    
 (Last Name, First Name) Use '%' for wildcard in PI names  
 Enter several PI/Project Leader names OR PI Profile IDs

Organization:  LOOKUP  
 Please enter at least 3 characters to use Lookup.  
 Contains  Begins with  Exact

Department Type:  SELECT

Organization Type:  SELECT

City:  Use '%' for wildcard

State:  SELECT

Country:  SELECT

Congressional District:  SELECT

DUNS Number:

### TEXT SEARCH



Text Search (Logic):  Characters left: 2500

And  Or  Advanced

Search in:  Projects  Publications  News

Limit Project search to:  Project Title  Project Terms  Project Abstracts

Limit Publication search to: Start Year: 2019 End Year: 2020

### PROJECT DETAILS

Project Number / Application ID:   
 Format: 5R01CA012345-04/8515397 Use '%' for wildcard in project number, e.g. %R21%  
 Enter multiple project numbers/application IDs

OR

1 R01 CA 811099 01 A1S1

Program Officer (PO):    
 (Last Name, First Name) Use '%' for wildcard  
 Enter several Program Officer (PO) names

Project Start Date: >=   
 Format: mm/dd/yyyy

Project End Date: <=   
 Format: mm/dd/yyyy

Award Notice Date: >   
 Format: mm/dd/yyyy



Agency/Institute/Center:  SELECT  
 Admin  Funding

NIH Spending Category:  SELECT

Funding Mechanism:  SELECT

Award Type:  SELECT

Activity Code:  CLOSE

Check/Uncheck All

- Research Grants
  - Research Project Grants
    - P01 Program Projects
    - R01 Equivalentents
      - DP2
      - R01
      - R23
      - R29
      - R37
      - RF1
    - R03
    - R15 AREA
    - R21

SELECT RESET CLEAR

Study Section:  SELECT  
 Standing CSR study sections only



# TOOLS/RESOURCES

- I Source for this presentation: Comparing Popular Research Project Grants: R01, R03, or R21 [NIH NIAID Article](#)
- I Early Stage Investigator (ESI) [Policies](#)
  - Including ESI extension request information
- I Next week's FSS: Developing Your First R01 Proposal



# LET'S ASK OUR EXPERT

DR. DEBORAH STENKAMP

- I Decision-making process for a proposed NIH project – what funding mechanism is appropriate?
- I Review panel take-aways
  - New/ESI proposal review
- I Advice to early career PIs
- I Other considerations

<https://www.webpages.uidaho.edu/webteam/research/rfd-faculty-success-seminars-postcard.pdf>



# **FACULTY SUCCESS SEMINARS**

*Let Us Be Your Guide  
Through the Proposal  
Development Process*



**JOIN US IN IRIC 305  
12:30 P.M. – 1:30 P.M. PT**

Can't join us in person? Then join us live via Zoom:  
[uidaho.zoom.us/j/798224314](https://uidaho.zoom.us/j/798224314). Each seminar will  
be recorded and be available on our website.

 **University of Idaho**  
Office of Research and  
Faculty Development

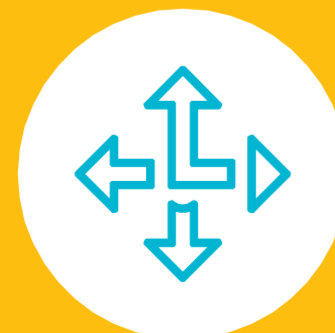


## FALL 2019

- Sept. 4** HERC IGEM Info Session
- Sept. 11** Find Funding Opportunities: Intro to Pivot
- Sept. 25** NSF CAREER All Year: An Introduction
- Oct. 2** W.M. Keck Foundation Info Session
- Oct. 16** Tips for Successful Proposal Writing
- Oct. 23** NSF CAREER All Year: Getting Started
- Oct. 30** Exploring Humanities Funding Opportunities
- Nov. 13** MW CTR-IN Funding Opportunities
- Nov. 20** NSF CAREER All Year: Integrating the Research and Education Plans
- Dec. 11** M.J. Murdock Trust Commercialization Initiation Program Info Session

## SPRING 2020

- Jan. 22** Developing Successful Project Management Plans for Large Proposals (**Rescheduled Apr 15**)
- Feb. 5** NSF: Broader Impacts Really Do Matter!
- Feb. 12** NIH: Funding Mechanisms Overview (R03, R21, R01)
- Feb. 19** NIH: Developing Your First RO1 Proposal
- Mar. 4** NIH: Understanding Proposal Review
- Mar. 11** NSF: Understanding Proposal Review
- Mar. 25** Fulbright Faculty Scholar Program Info Session
- Apr. 1** Find Funding Opportunities: Intro to Pivot
- Apr. 8** NSF MRI: Creating Competitive Proposals
- Apr. 15** Developing Successful Project Management Plans for Large Proposals



**WE GUIDE THE DEVELOPMENT  
OF COMPETITIVE EXTERNAL  
GRANT PROPOSALS**

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Research  
and Faculty  
Development**

**Phone:** (208) 885-1144

**Email:** [ored-rfdteam@uidaho.edu](mailto:ored-rfdteam@uidaho.edu)

**Website:** [uidaho.edu/orfd](http://uidaho.edu/orfd)

# THANK YOU FOR COMING!



## *QUESTIONS?*

**BEFORE YOU GO...**

Please take a brief 3-question sli.do poll

[www.slido.com](http://www.slido.com) or use the **sli.do** app

Use code #FSS

