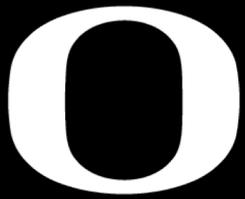


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Navigating the NIH for Early Career Researchers

October 29, 2019

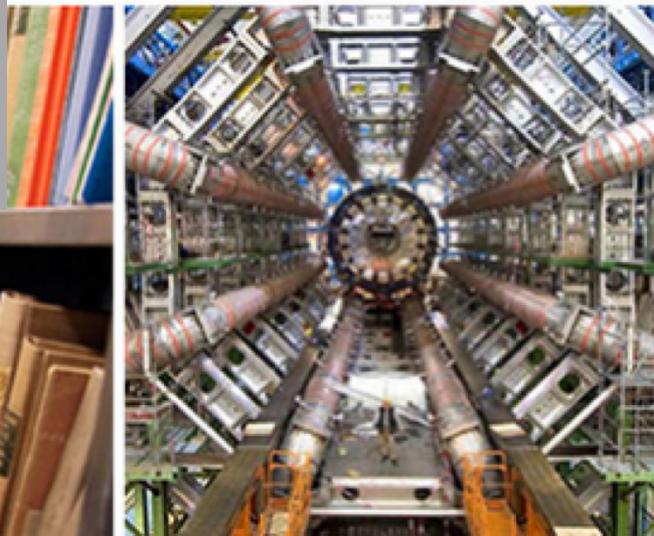
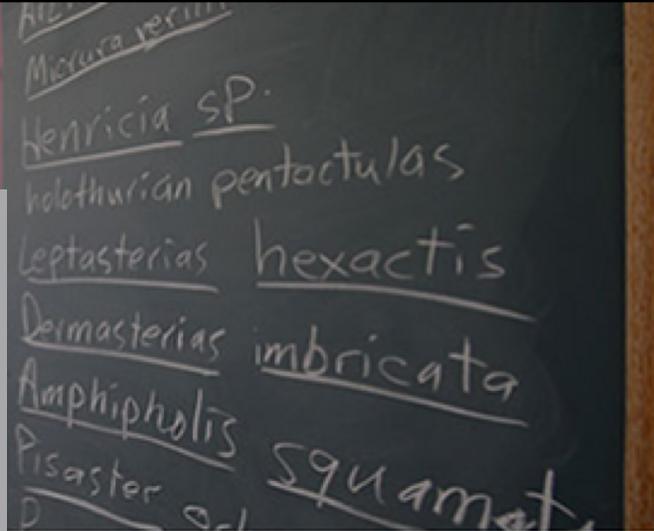
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Research Development
Services

Research Development Services provides a variety of services for faculty seeking support for research, creative work, public service and scholarly projects



Agenda

- **Overview of NIH**
 - Mission
 - Budget
 - Organizational structure
- **Funding Opportunities**
 - How to find
 - How to comprehend
- **NIH for Early Career Researchers**
 - Early career mechanisms
 - ESI vs. NI
- **Timeline for successful submission**
- **Peer Review Process**
 - Opportunities to serve on peer-review



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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.



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NIH Goals

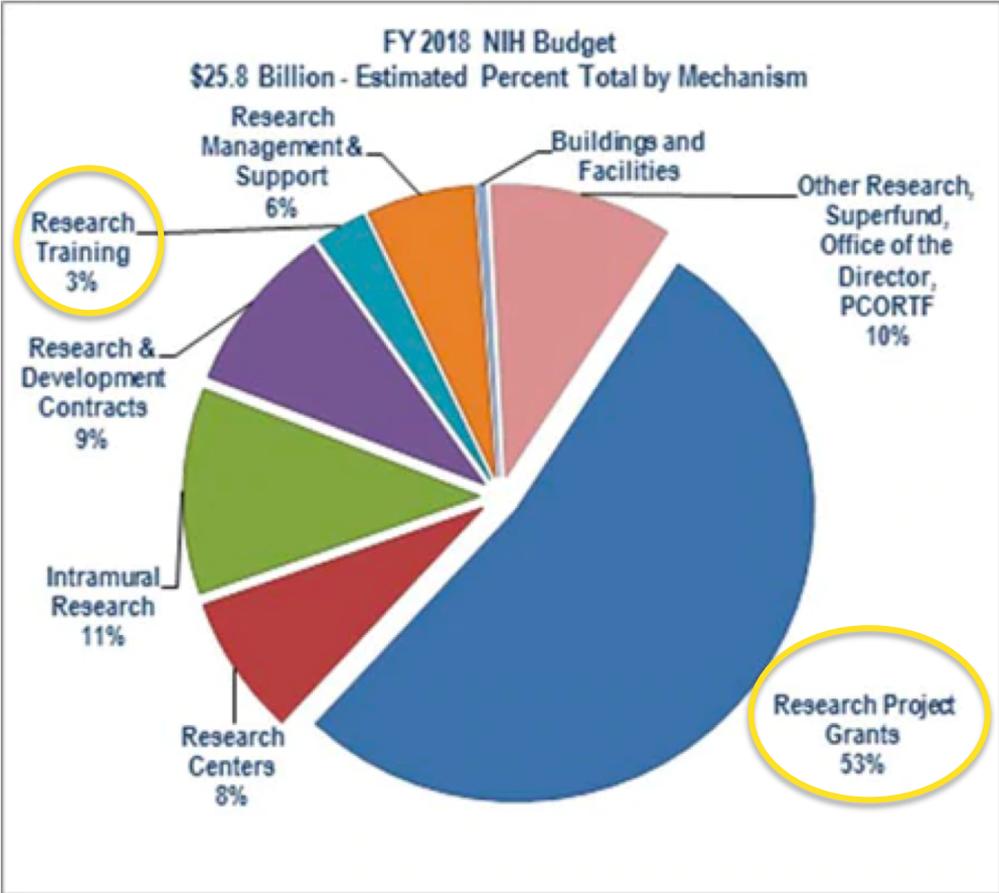
- to foster fundamental creative discoveries, innovative research strategies, and their applications as a basis for ultimately protecting and improving health;
- to develop, maintain, and renew scientific human and physical resources that will ensure the Nation's capability to prevent disease;
- to expand 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; and
- to exemplify and promote the highest level of scientific integrity, public accountability, and social responsibility in the conduct of science.



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NIH Budget Allocation



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NIH Structure

Comprised of 27 institutes and centers, each with different:

- Mission & priorities
- Budget
- Funding strategy



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OVERVIEW OF THE NATIONAL INSTITUTES OF HEALTH AND NATIONAL CANCER INSTITUTE GRANTS PROCESS



Learn more about the grants process at cancer.gov/GrantsProcess.
Icons made by Freepik from <http://www.flaticon.com> is licensed by CC BY 3.0

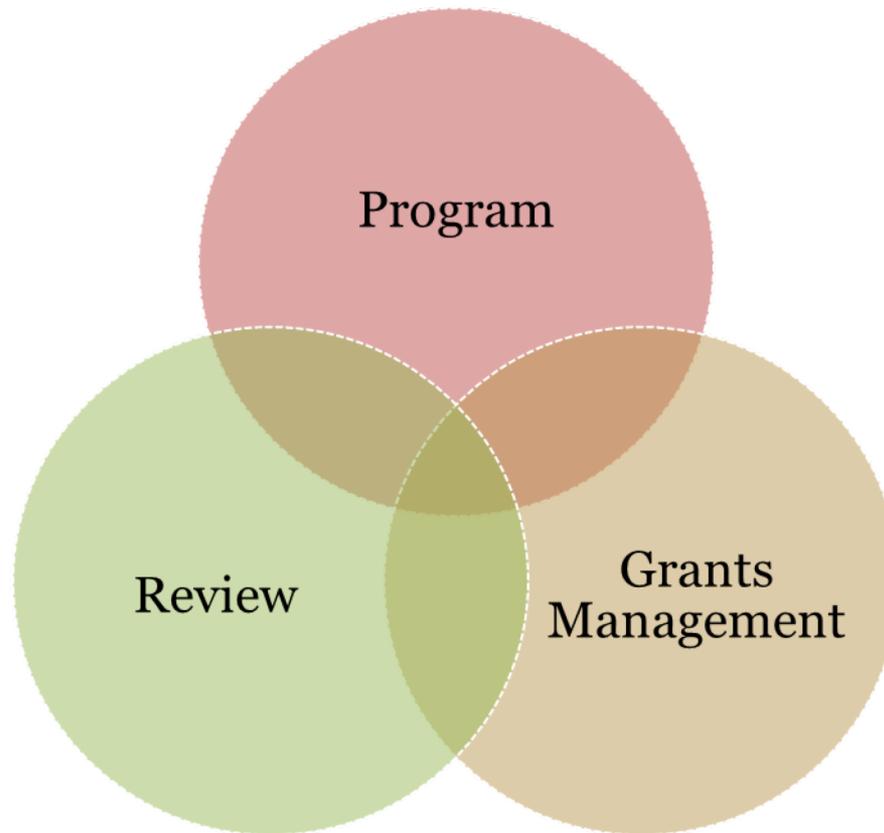
Extramural Organizational Structure



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Extramural Organizational Structure



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Program Officer

- Responsible for the programmatic, scientific, and/or technical aspects of a grant
- Provides scientific guidance to investigators pre- and post-award
- Develops initiatives
- Provides post-award oversight



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Scientific Review Officer

- Responsible for scientific and technical review
 - Ensures fair and unbiased evaluation of scientific and technical merit
 - Provides a summary of the evaluation
 - Reviews applications for completeness and conformance with application requirements
- Point of contact for applicants during the review process



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Grants Management Officer

- Responsible for completion of business management requirements
 - Evaluates applications for administrative content and compliance with policy
 - Negotiates awards
 - Interprets grants administration policies



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Finding Funding Opportunities

- **Pivot**
 - Search by funder
 - Weekly updates based on your keyword
- **NIH Guide Listserv**
 - Receive weekly updates on Friday
 - <https://grants.nih.gov/grants/guide/listserv.htm>
- **Grants.gov**



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Type of FOA	Description
Program Announcements (PA, PAR, PAS)	<ul style="list-style-type: none"> • Highlights areas of focus • Usually ongoing (3 years) • Often use standard receipt dates
Requests for Applications (RFA)	<ul style="list-style-type: none"> • Narrowly defined scope • Usually single receipt date • Set aside funds • Institutes & Centers (IC) usually convenes review panel
Parent Announcements	<ul style="list-style-type: none"> • Type of program announcement • Generally span the breadth of NIH mission • By activity code (R01, R03, etc.) • For “investigator initiated” or “unsolicited” research ideas



Understanding Funding Opportunities

Department of Health and Human Services

Part 1. Overview Information

Participating Organization(s)

National Institutes of Health ([NIH \(http://www.nih.gov\)](http://www.nih.gov))

Components of Participating Organizations

National Cancer Institute ([NCI \(http://www.nci.nih.gov/\)](http://www.nci.nih.gov/))

National Eye Institute ([NEI \(http://www.nei.nih.gov/\)](http://www.nei.nih.gov/))

National Heart, Lung, and Blood Institute ([NHLBI \(http://www.nhlbi.nih.gov/\)](http://www.nhlbi.nih.gov/))

National Human Genome Research Institute ([NHGRI \(https://www.genome.gov/\)](https://www.genome.gov/))

National Institute on Aging ([NIA \(http://www.nia.nih.gov/\)](http://www.nia.nih.gov/))

National Institute on Alcohol Abuse and Alcoholism ([NIAAA \(http://www.niaaa.nih.gov/\)](http://www.niaaa.nih.gov/))

National Institute of Allergy and Infectious Diseases ([NIAID \(http://www.niaid.nih.gov/\)](http://www.niaid.nih.gov/))

National Institute of Arthritis and Musculoskeletal and Skin Diseases ([NIAMS \(http://www.niams.nih.gov/\)](http://www.niams.nih.gov/))

National Institute of Biomedical Imaging and Bioengineering ([NIBIB \(http://www.nibib.nih.gov/\)](http://www.nibib.nih.gov/))

Eunice Kennedy Shriver National Institute of Child Health and Human Development ([NICHD \(http://www.nichd.nih.gov/\)](http://www.nichd.nih.gov/))

(<http://www.nichd.nih.gov/>)

National Institute of Dental and Craniofacial Research ([NIDCR \(http://www.nidcr.nih.gov/\)](http://www.nidcr.nih.gov/))

National Institute on Deafness and Other Communication Disorders ([NIDCD \(https://www.nidcd.nih.gov/\)](https://www.nidcd.nih.gov/))

National Institute of Diabetes and Digestive and Kidney Diseases ([NIDDK \(http://www.niddk.nih.gov/\)](http://www.niddk.nih.gov/))

National Institute on Drug Abuse ([NIDA \(http://www.nida.nih.gov/\)](http://www.nida.nih.gov/))

National Institute of Environmental Health Sciences ([NIEHS \(http://www.niehs.nih.gov/\)](http://www.niehs.nih.gov/))

National Institute of General Medical Sciences ([NIGMS \(http://www.nigms.nih.gov/\)](http://www.nigms.nih.gov/))

National Institute of Mental Health ([NIMH \(http://www.nimh.nih.gov/\)](http://www.nimh.nih.gov/))

National Institute of Neurological Disorders and Stroke ([NINDS \(http://www.ninds.nih.gov/\)](http://www.ninds.nih.gov/))

National Institute of Nursing Research ([NINR \(http://www.ninr.nih.gov/\)](http://www.ninr.nih.gov/))

National Institute on Minority Health and Health Disparities ([NIMHD \(http://www.nimhd.nih.gov/\)](http://www.nimhd.nih.gov/))

National Library of Medicine ([NLM \(http://www.nlm.nih.gov/\)](http://www.nlm.nih.gov/))

National Center for Complementary and Integrative Health ([NCCIH \(http://www.nccam.nih.gov/\)](http://www.nccam.nih.gov/))

Division of Program Coordination, Planning and Strategic Initiatives, Office of Research Infrastructure Programs ([ORIP \(http://dpcpsi.nih.gov/orip/index.aspx\)](http://dpcpsi.nih.gov/orip/index.aspx))

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 [R01 IC-Specific Scientific Interests and Contact \(https://grants.nih.gov/grants/guide/contacts/parent-R01-CT-Specific-Scientific-Interests-and-Contact\)](https://grants.nih.gov/grants/guide/contacts/parent-R01-CT-Specific-Scientific-Interests-and-Contact) website.



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Understanding Funding Opportunities

Announcement Type

Reissue of [PA-18-484 \(https://grants.nih.gov/grants/guide/pa-files/PA-18-484.html\)](https://grants.nih.gov/grants/guide/pa-files/PA-18-484.html)

Related Notices

- **October 22, 2019** - Notice of Special Interest (NOSI): Geospatial Approaches in Cancer Control and Population Sciences. See Notice [NOT-CA-20-004 \(https://grants/guide/notice-files/NOT-CA-20-004.html\)](https://grants/guide/notice-files/NOT-CA-20-004.html).
- **October 22, 2019** - Notice of Special Interest: Promoting research opportunities on HIV/AIDS in NIAMS. See Notice [NOT-AR-20-005 \(https://grants/guide/notice-files/NOT-AR-20-005.html\)](https://grants/guide/notice-files/NOT-AR-20-005.html).
- **October 09, 2019** - Notice of Special Interest (NOSI): Epidemiologic Studies to Characterize Cardiovascular Health and its Predictors and Trajectories in Diverse Groups of Children. See Notice [NOT-HL-19-711 \(https://grants/guide/notice-files/NOT-HL-19-711.html\)](https://grants/guide/notice-files/NOT-HL-19-711.html).
- **October 09, 2019** - Notice of Special Interest: Understanding the biology of iodine nutrition, assessment, and outcomes in women, infants, and children (R01, R21, R03). See Notice [NOT-HD-19-028 \(https://grants/guide/notice-files/NOT-HD-19-028.html\)](https://grants/guide/notice-files/NOT-HD-19-028.html).
- **October 09, 2019** - Notice of Special Interest: Research on Emergency Medical Services for Children (EMSC). See Notice [NOT-HD-19-022 \(https://grants/guide/notice-files/NOT-HD-19-022.html\)](https://grants/guide/notice-files/NOT-HD-19-022.html).
- **October 09, 2019** - Notice of Special Interest (NOSI): Use of Biological Information to Understand How the Interplay of Environmental Exposures and Genes Influences Cancer Risk. See Notice [NOT-CA-20-002 \(https://grants/guide/notice-files/NOT-CA-20-002.html\)](https://grants/guide/notice-files/NOT-CA-20-002.html).
- **October 8, 2019** - Consolidated Notice on NCCIH Clinical Trials Policies. See Notice [NOT-AT-20-001 \(https://grants/guide/notice-files/NOT-AT-20-001.html\)](https://grants/guide/notice-files/NOT-AT-20-001.html).
- **September 25, 2019** - Notice of Special Interest: Nutrigenetics and Nutrigenomics Approaches for Nutrition Research. See Notice [NOT-DK-19-019 \(https://grants.nih.gov/grants/guide/notice-files/NOT-DK-19-019.html\)](https://grants.nih.gov/grants/guide/notice-files/NOT-DK-19-019.html).
- **September 20, 2019** - Notice of Special Interest: Research to Advance the Understanding and Management of the Multiple Organ Dysfunction Syndrome in Children (R01, R21). See Notice [NOT-HD-19-023 \(https://grants/guide/notice-files/NOT-HD-19-023.html\)](https://grants/guide/notice-files/NOT-HD-19-023.html).



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Understanding Funding Opportunities

Application Due Date(s)

Standard dates ([//grants.nih.gov/grants/guide/url_redirect.htm?id=11111](https://grants.nih.gov/grants/guide/url_redirect.htm?id=11111)) apply, by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on these dates.

Review and Award Cycles

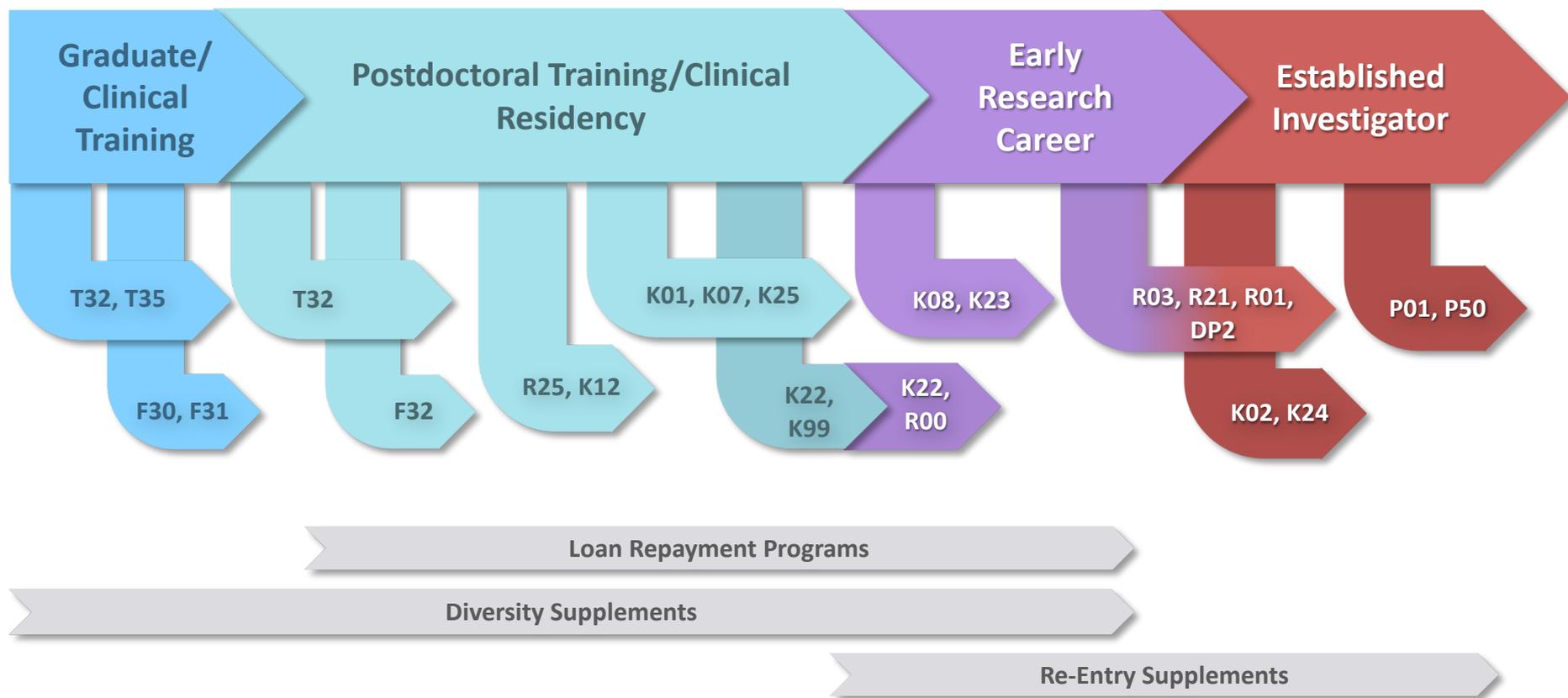
	Cycle I	Cycle II	Cycle III
Application Due Dates	January 25 - May 7	May 25 - September 7	September 25 - January 7
Scientific Merit Review	June - July	October - November	February - March
Advisory Council Round	August or October *	January	May
Earliest Project Start Date	September or December *	April	July



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Funding Mechanism by Career Stage



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Mechanism	Description
R01	<ul style="list-style-type: none"> • Used to support a discrete, specified, circumscribed research project • Need extensive preliminary data • Utilized by all ICs
R21	<ul style="list-style-type: none"> • Encourages new, exploratory and developmental research projects by providing support for the early stages of project development. Sometimes used for pilot and feasibility studies. • No preliminary data is generally required*** • Most ICs utilize
R03	<ul style="list-style-type: none"> • 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, etc. • Utilized by more than half of the NIH ICs • Consider UO INTERNAL funding
DP2	<ul style="list-style-type: none"> • To support highly innovative research projects by new investigators in all areas of biomedical and behavioral research.
K-Series	<ul style="list-style-type: none"> • For support of a scientist/clinician, committed to research, in need of both advanced research training and additional experience • Transition between career stages



Funding Opportunities for Early Career Researchers

DP2: NIH Director's New Innovator Award

- Supports early-stage investigators of exceptional creativity who propose bold and highly innovative new research approaches that have the potential to produce a major impact in biomedical and behavioral research
- Awardees are required to commit at least 25% of their research effort each year to activities supported by the New Innovator Award
- \$1.5M in direct costs over 5 years
- Typically due late August/early September



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Funding Opportunities for Early Career Researchers

NIGMS MIRA for Early Stage Investigators (R35)

- Improve the efficiency and effectiveness of its support for basic biomedical research
- Increase the stability of investigator funding
- Enhance investigators' ability to take on ambitious scientific problems creatively
- Increase the flexibility for investigators to follow important new research directions
- Improve the distribution of funding to improve overall scientific productivity and the chances for important breakthroughs
- Reduce the time spent by researchers writing and reviewing grant applications



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NI vs. ESI

NI: New Investigator

An investigator who has not previously received substantial, independent funding from NIH. Following awards are NOT considered substantial:

- R00, R03, R21, R56, etc.
- Any training mechanism (F, T)
- Institutional or individual K series for mentorship
- Loan repayment



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NI vs. ESI

ESI: Early Stage Investigator

Any NI investigator who is also within 10 years of completing his/her terminal research degree or is within 10 years of completing medical residency

ESI Applying for R01 or DP2 grants:

- Receive special attention at Review (career stage) and at National Advisory Council (high program priority)
- No imposed reductions in duration and amount of awards (beyond the recommendations of the initial review group)
- Increased payline for scored R01 applications from Early-Stage Investigators



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Extending ESI status

- Some researchers may have lapses in their research or research training, or have experienced periods of less than full-time effort. NIH will consider requests to extend the ESI status period for reasons that can include: medical concerns, disability, family care responsibilities, natural disasters, and active duty military service, determined on a case by case basis at the sole discretion of NIH.
- Principal investigators can submit a request for an ESI extension via an ESI Extension Request link found in the Education section of the PI's Personal Profile in eRA Commons. For step-by-step instructions, see the ESI Extension Request online help and the ESI Status Extension Request video tutorial



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Preparing your submission

When is the right time to submit?

Balance between:

- Getting your lab started/keeping the work going
- Submitting at the most optimal time
 - Submit when you think the application will be the most competitive

Consider:

- Your publication record
 - Papers must be published/in press (not submitted)
 - Do they pertain directly to the aims?
- Your preliminary data



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Preparing your submission

Heilmeier Catechism

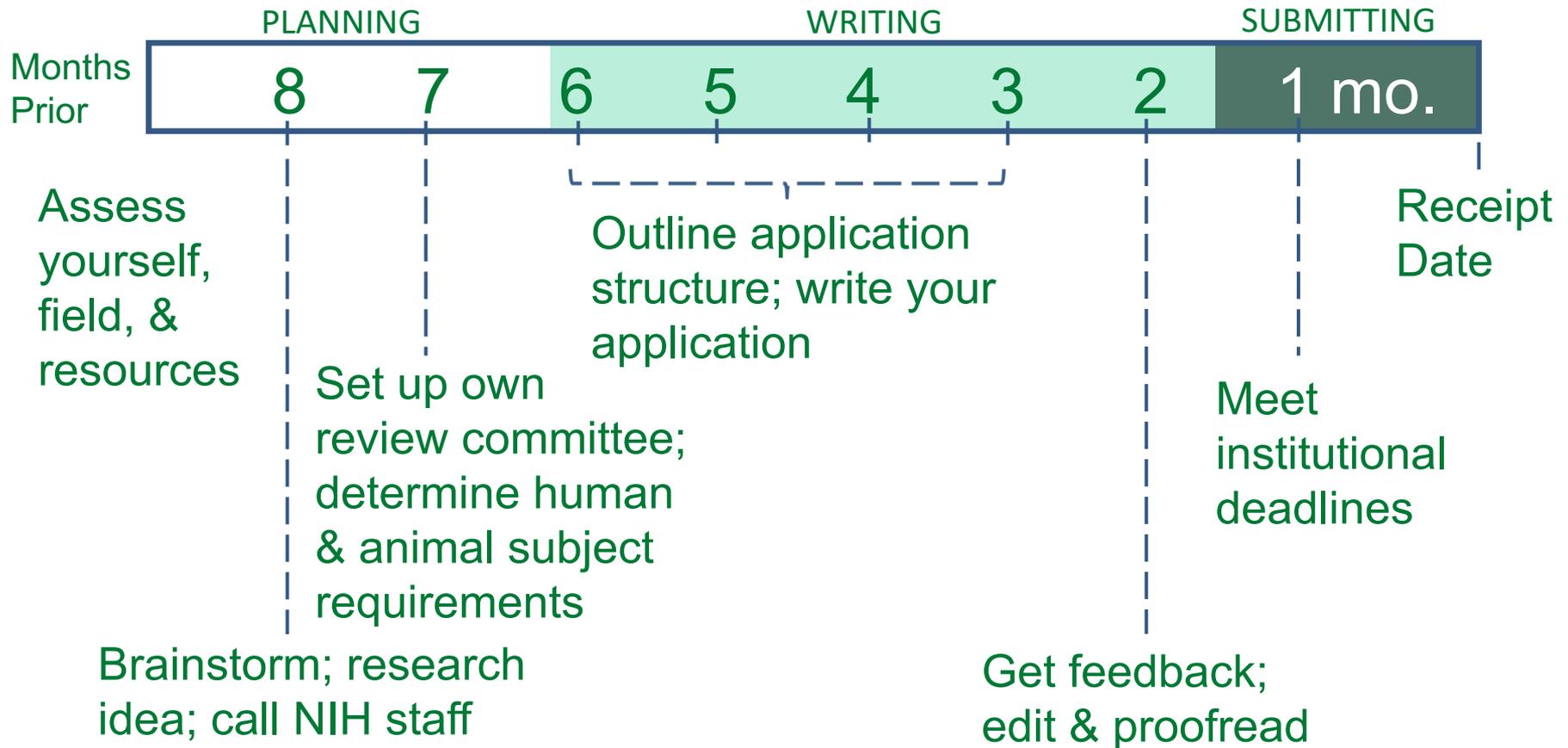
- What are you trying to do? Articulate your objectives using absolutely no jargon.
- How is it done today, and what are the limits of current practice?
- What is new in your approach and why do you think it will be successful?
- Who cares? If you are successful, what difference will it make?
- What are the risks?
- How much will it cost?
- How long will it take?
- What are the mid-term and final “exams” to check for success?



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Preparing your submission

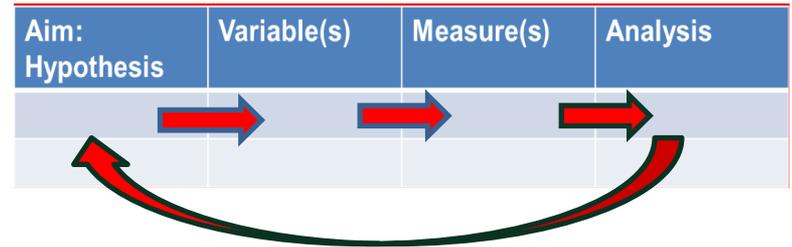


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Preparing your submission

NIH funds well-operationalized studies



Will you be in trouble if the study is....

Discovery-driven? No, but you need to:

- Describe the rationale for the aim and how it will provide the foundation to follow up with more mechanistic questions
- Have a defined plan for prioritizing large amounts of data

Uses a model system? No, but you need to:

- Place the work in context as to how it will propel the field forward
- Emphasize its significance

Not immediately translational? No,

- But if you discuss the potential translatability of a study it becomes fair game for reviewers to disagree



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Next Workshop

NIH Part 2: Preparing Your First R-Series Submission

- Developing your outline
 - Components of a proposal and resources to help prepare
- Anatomy of an aims page
- Grant review with NIH peer-reviewers

Tuesday, November 19, 12-1pm

EMU Cedar (231)

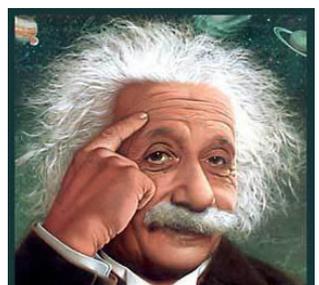


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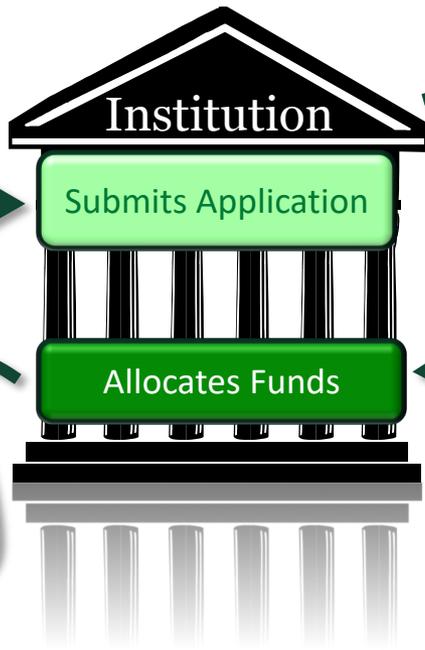
Peer Review Process

Great Research Idea!

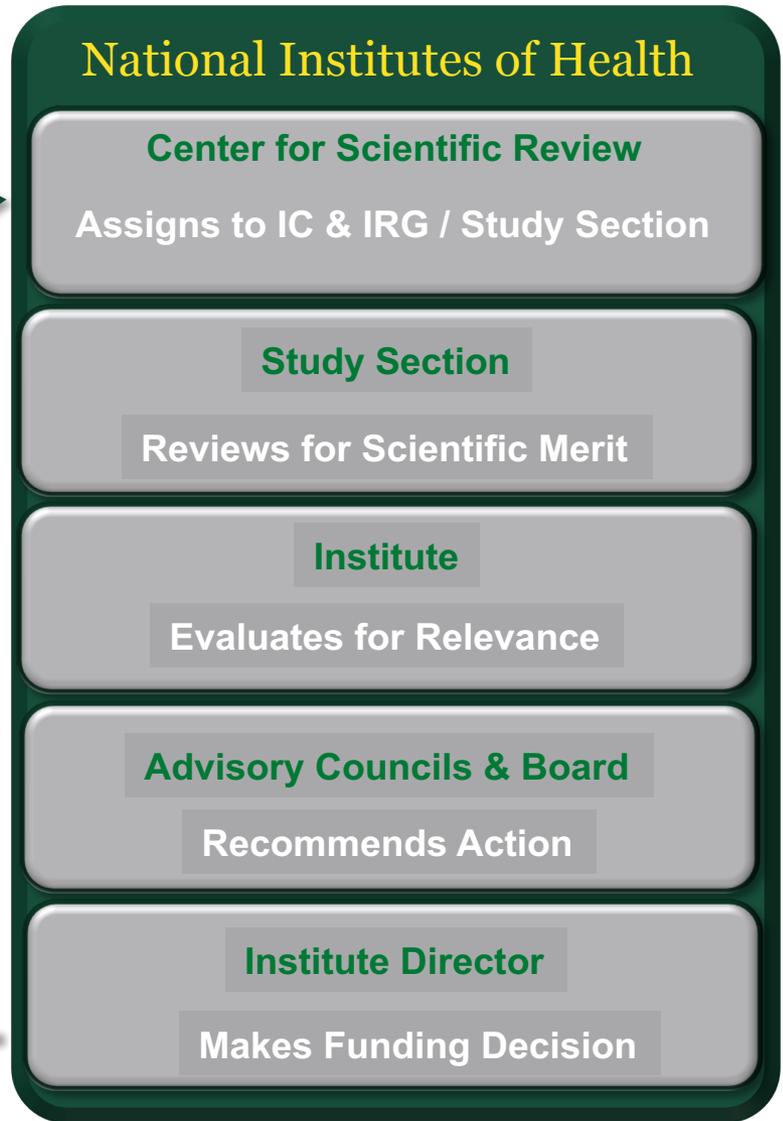


Investigator

Performs the Research



30



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Peer Review Process

Center for Scientific Review (CSR) vs. Institute/Center Review:

- CSR is most R01s, some PA/RFA
- IC review is for specific program projects, training grants, career development awards, RFAs

Study Sections:

- Do NOT make funding decisions
- Evaluate and make recommendations based on review criteria
- Provide priority scores (or not discussed) and written critiques (summary statements)

Reviewer assignments:

- Minimum of 3 reviewers per proposal
- Based on scientific content, expertise and consider COI



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Review Process

Top 50% of proposals are discussed in study section:

- 9 hour day of review; each proposal gets ~13-14 minutes

In discussion:

- Reviewers with conflicts leave room
- Assigned reviewers present initial scores
- Primary reviewer explains project; strengths/weaknesses
- Other assigned reviewers follow
- Open discussion
- Assigned reviewers present score following discussion
 - Indication of voting out of range



Scoring Criteria

Review FOA: relevant criteria listed here

- Sent to reviewers; guides discussions; format for critiques in summary statement

Standard Criteria: 1-9

- Significance
- Approach
- Innovation
- Investigator(s)
- Environment
- Protection of human subjects/Vertebrate Animals/Biohazard*

Overall Impact/Priority Score: 1-9



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Priority/Impact Score

Overall Impact:

The likelihood that a project will have a sustained and powerful influence on science (and/or clinical practice and/or technological developments?)

Overall Impact	High	Medium	Low
Score	1 2 3	4 5 6	7 8 9

Evaluating Overall Impact:

Consider the 5 criteria: significance, investigator, innovation, approach, environment (weighted based on reviewer's judgment)

e.g. Applications are addressing a problem of high importance in the field. May have some or no technical weaknesses.

e.g. Applications may be addressing a problem of high importance in the field, but weaknesses in the criteria bring down the overall impact to medium.

e.g. Applications may be addressing a problem of moderate importance in the field, with some or no technical weaknesses

e.g. Applications may be addressing a problem of moderate/high importance in the field, but weaknesses in the criteria bring down the overall impact to low.

e.g. Applications may be addressing a problem of low or no importance in the field, with some or no technical weaknesses.

5 is a good medium-impact application, and the entire scale (1-9) should always be considered.



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Summary Statement

PROGRAM CONTACT: Stuart Moss
(301) 435-6979 mossstua@mail.nih.gov

SUMMARY STATEMENT (Privileged Communication)
Release Date: 03/27/2016

Application Number: 1 R21 HDXXXXX-01
Principal Investigator CURIE, MARIE, PHD
Applicant Organization: University of Paris
Review Group: CMIR *Meeting Date:* 03/23/2016
RFA/PA: PA11-261
Council: MAY 2014 PCC: RS -SM
Requested Start: 07/01/2016
Project Title: The Effect of Radium on the Testis

SRG Action: **Impact/Priority Score: 30 Percentile: 22 #**
Human Subjects: 10-No human subjects involved
Animal Subjects: 30-Vertebrate animals involved –no SRG concerns noted



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Summary Statement

RESUME AND SUMMARY OF DISCUSSION:

Written by the SRO based on the final outcome of the discussion, summarizes strengths & weaknesses mentioned by all reviewers, highlights areas of concurrence & disagreement between reviewers.

CRITIQUE 1

Significance: 3

Investigator: 1

Innovation: 1

Approach: 4

Environment: 1

Overall Impact:

Written by the individual reviewer to summarize their opinion on the overall strengths and weaknesses of the application.



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Early Career Reviewer Program

- Help emerging researchers advance their careers by exposing them to experience in peer review that may make them more competitive as applicants
- Train and educate qualified scientists without prior CSR review experience to develop critical and well-trained reviewers
- Enrich the existing pool of reviewers by including scientists from less research-intensive institutions



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Work with RDS

Contact us for supporting the development of your proposals.

Research Development Services

www.rds.uoregon.edu

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541-346-6239



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