Steps to a Competitive Application

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NIH supports intramural research in its own labs and extramural research & education through grants

FY2026 NIH Budget = $48.7 billion

~$6B was allocated in FY25 to fund ~8,000 new or renewed grants

NIH Director

Jay Bhattacharya, MD, PhD
Stanford University
Health Economist

https://healthpolicy.fsi.stanford.edu/news/bhattacharya-awarded-robert-j-zimmer-medal-intellectual-freedom

NIH consists of 27 Institutes & Centers (I/Cs)

21 National Institutes each focused on an area of biomedical research:

- National Cancer Institute (NCI)
- National Institute of Neurological Disease & Stroke (NINDS), etc.
- National Library of Medicine (NLM)

6 Centers providing support for research:

- National Center for Advancing Translational Sciences (NCATS), etc.
- **Center for Scientific Review (CSR)**

Your research must fit within the scope of an NIH Institute

Each NIH Institute supports research & education in a specific area of biomedical research

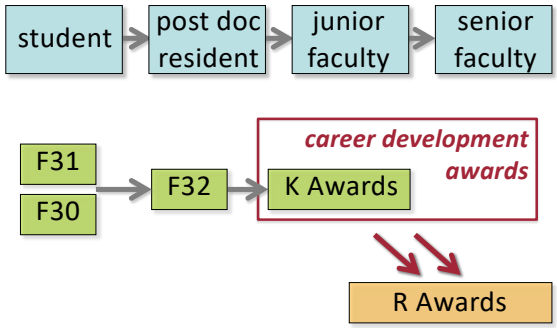
Institute Director
— senior scientist/administrator

Intramural Research Programs
— at the Bethesda campus & other federal sites

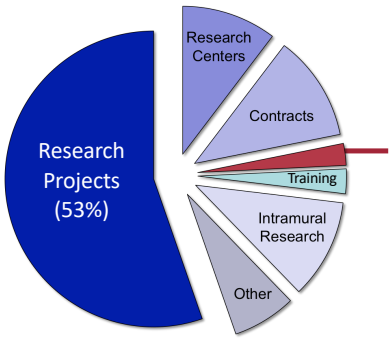
Extramural Research Programs
— external support through grants

Institute Advisory Council
— oversight body for the Institute
— senior scientists, lay persons, government reps
— provides strategic oversight
— *final recommendation on grant funding*

NIH provides funding for career development at different stages



Dividing up the NIH pie . . .



Career Development Awards $943M (2%)

K08: Mentored Clinical Scientist Award

— to develop clinician research scientists as independent investigators

Requires:

- clinical doctoral degree
- must have initiated postgraduate training
- mentor with extensive research experience
- 75% effort over 3-5 years

FY2025:
196 new K08 awards
29.7% success rate

K23: Mentored Patient-Oriented Research Career Development Award

— to develop investigators committed to patient-oriented research

Requires:

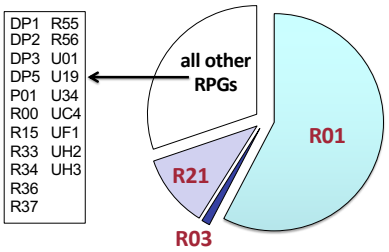
- clinical or nursing doctoral degree
- completion of all clinical training
- mentor with extensive research experience
- 75% effort over 3-5 years

FY2025:

248 new K23 awards
30.5% success rate

NIH Research (R) Awards provide support for independent, investigator-initiated projects

~$6B was allocated in FY25 to fund ~8,000 new or renewed grants



R01: NIH Research Project Grant Program

—supports a discrete, specified, circumscribed project in scientific areas that represent the investigators' specific interests and competencies

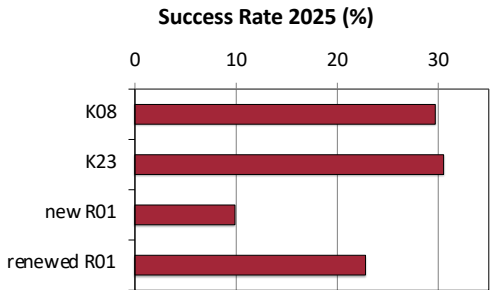
NIH's oldest, most commonly used grant program; used by all ICs

Generally awarded for 3–5 years; no dollar limit unless specified

FY2025:

3405 **new** R01 awards
9.9% success rate
661 **renewed** R01 awards
22.8% success rate

New R01 awards have lower success rates



Data from: https://report.nih.gov/funding/nih-budget-and-spending-data-past-fiscal-years/success-rates

NIH supports New and Early Stage Investigators

New Investigator (NI) has not received a substantial NIH research grant (e.g., R01)

- can have held small research grants e.g., R03, R21, R00, or K awards, Fellowships
- but not major research awards: R01, P01

Early Stage Investigator (ESI) is a New Investigator within 10 years of completing research training (doctorate or residency)

- status defined in your eRA Commons profile by
  - — date of doctoral degree
  - — date completed residency

Make sure that your profile is current!

Early Stage Investigators receive special consideration for R01 applications

Early Stage Investigator (ESI) Policies

An ESI is a Program Director/Principal Investigator who has completed their terminal research degree or end of post-graduate clinical training, whichever is later, within the past 10 years and who has not previously competed successfully as a PD/PI for a substantial NIH independent research award. Read on to learn about NIH policies and how NIH support for ESIs helps promote the growth and stability of the future biomedical research workforce.

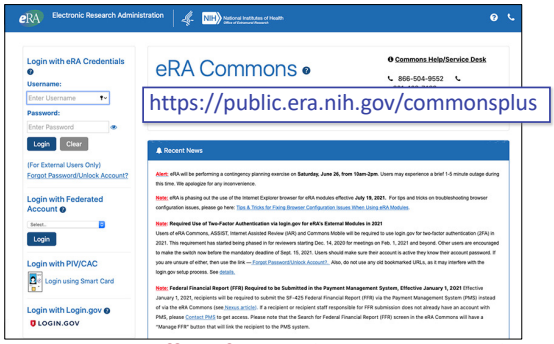
ESI Infographics Early Stage Investigator Status Infographic (PDF, 788 KB)

https://grants.nih.gov/policy-and-compliance/policy-topics/early-stage-investigators

2025: 19% of ESI applicants received funding for R01-equivant grants

https://report.nih.gov/nihdatabook/report/304

You must have an eRA Commons account to submit applications to NIH



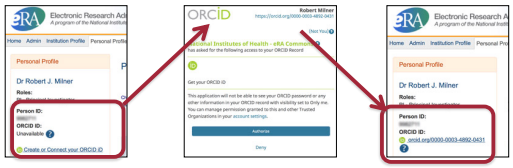
Contact your Office of Research to set up account!

You must have an ORCID identifier linked to your eRA Commons Personal Profile

ORCID — Open Researcher and Contributor Identifier

- unique, persistent identifier that tracks your contributions over time

go to eRA commons *link to orcid.org* *add ORCID iD*



Applications will NOT be accepted unless an ORCID iD is linked to the PI's eRA Commons Profile!

see: NIH Notice NOT-OD-19-109

The application consists of electronic forms + attachments (pdf)

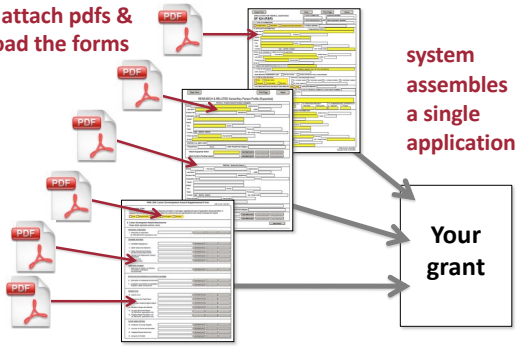
Format for attachments is defined:

- single-spaced
- specific fonts & sizes
- single column
- minimum margins

Applications that do not conform may be returned without review!

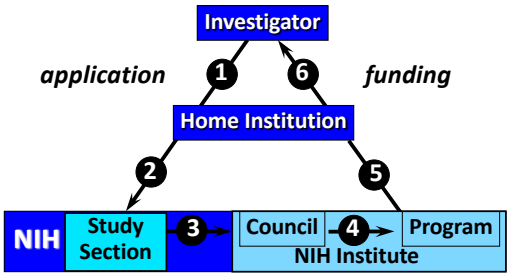
The electronic submission system assembles the separate pdfs & forms into a single application

You attach pdfs & upload the forms



system assembles a single application

The Grant Triangle defines the relationship between you, your institution, and NIH



6. the **home institution** administers the grant for the investigator

Grant reviews at NIH are managed by the Center for Scientific Review (CSR)

Independent unit within NIH separate from Institutes

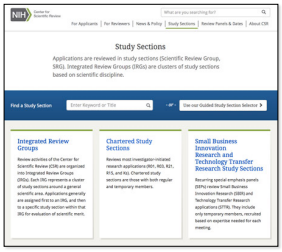
Receives & assigns applications:

- to Study Sections for review
- to Institutes for funding

Administers review panels (Study Sections)

NIH Study Sections and membership rosters are listed on the NIH website

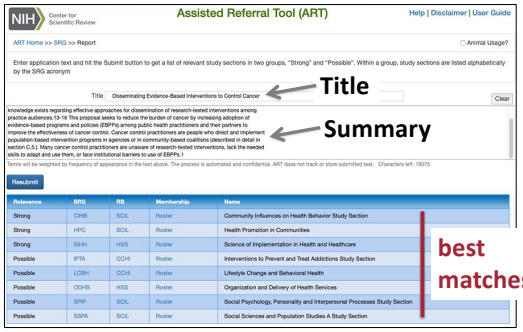
Standing membership and rosters for last three meetings



Roster will also be listed on a summary statement (grant review)

https://public.csr.nih.gov/StudySections

Use the Assisted Referral Tool (ART) to find a study section



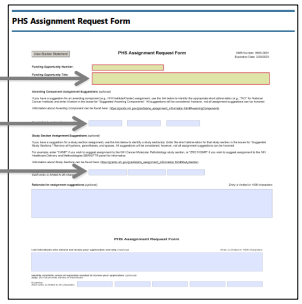
https://public.csr.nih.gov/ForApplicants/ArtHome

Use the Assignment Request Form to request assignment to a NIH Institute and/or Review Panel

Program Announcement

Request NIH Institute

Request review panel



NIH Study Sections usually meet for 1–2 days, 3 times per year

Members:

- working scientists (~15-30)
- one member serves as Chair

Scientific Review Officer (SRO):

- NIH staff person
- assigns grants to reviewers, collates reviews etc

Each proposal is typically reviewed by 3 reviewers

The **review criteria** are defined for each application type

Each assigned reviewer provides written critiques submitted before the meeting

Each discussed proposal gets an **Impact Priority** score:

- scale: 10 (exceptional) to 90 (worst)
- bottom 2/3 of applications may not be discussed and will not receive a score

The 5 criteria for review of Research grants have been combined into 3 factors

Significance

Innovation

Factor 1 (scored 1–9)
Importance of the Research

Approach

Factor 2 (scored 1–9)
Rigor & Feasibility

Investigators

Environment

Factor 3 (overall impact)
Expertise & Resources

https://grants.nih.gov/policy-and-compliance/policy-topics/peer-review/simplifying-review/framework

Mentored K awards are reviewed by 5 criteria

Candidate

Career Development Plan
Career Goals & Objectives

Research Plan

Mentor(s), Consultant(s), Collaborator(s)

Environment and Institutional Commitment to the Candidate

Each assigned reviewer recommends an impact score on a range of 1 (exceptional) to 9 (poor)

Impact	Score	Descriptor	Additional Guidance on Strengths/Weaknesses
High	1	Exceptional	Exceptionally strong with essentially no weaknesses
	2	Outstanding	Extremely strong with negligible weaknesses
	3	Excellent	Very strong with only some minor weaknesses
Medium	4	Very Good	Strong but with numerous minor weaknesses
	5	Good	Strong but with at least one moderate weakness
	6	Satisfactory	Some strengths but also some moderate weaknesses
Low	7	Fair	Some strengths but with at least one major weakness
	8	Marginal	A few strengths and a few major weaknesses
	9	Poor	Very few strengths and numerous major weaknesses
Non-numeric score options: NR = Not Recommended for Further Consideration, DF = Deferred, AB = Abstention, CF = Conflict, NP = Not Present, ND = Not Discussed			
Minor Weakness: An easily addressable weakness that does not substantially lessen impact **Moderate Weakness:** A weakness that lessens impact **Major Weakness:** A weakness that severely limits impact			

http://grants.nih.gov/grants/peer/guidelines_general/scoring_system_and_procedure.pdf

NIH Study Sections divide the grants into thirds

TOP	MIDDLE	LOWEST
Discussed & considered for funding	Competitive but not discussed	Not competitive & not discussed

- decided by committee vote at start of session
- based on reviewer's evaluations of the applications

https://grants.nih.gov/news-events/nih-extramural-nexus-news/2025/11/emergency-modifications-to-nih-peer-review

A typical sequence of review . . .

1. process moderated by Chair
2. reviewers indicate preliminary enthusiasm
3. primary & secondary reviewers present
4. tertiary reviewer comments
5. open discussion among panel
6. reviewers recommend final scores
7. all panel members score application
8. SRO writes summary of discussion

Watch a video of a mock study section review

https://www.youtube.com/watch?v=7AcVCOBJtuQ

(NCI Scientific Events and Resources)

What happens next . . .

Written reviews & scores (summary statements or "pink sheets") are collated by SRO & distributed to applicant via the eRA Commons

The Institute Advisory Council determines the payline based on available funding
- approves grants for funding

Notice of Award sent to applicant & institution

A competitive proposal must have high impact and few, if any, weaknesses

Your Goal:

SUMMARY STATEMENT
(Privileged Communication)

PROGRAM CONTACT:

Release Date:
Revised Date:
Application Number:

Principal Investigator

Impact/Priority Score: 10 Percentile: 2

Review Group: AMS
Arthritis and Musculoskeletal and Skin Diseases Special Grants Review Committee

CRITIQUE 1:	CRITIQUE 2:	CRITIQUE 3:
Significance: 2	Significance: 1	Significance: 2
Investigator(s): 1	Investigator(s): 1	Investigator(s): 2
Innovation: 1	Innovation: 1	Innovation: 1
Approach: 2	Approach: 1	Approach: 1
Environment: 1	Environment: 1	Environment: 1

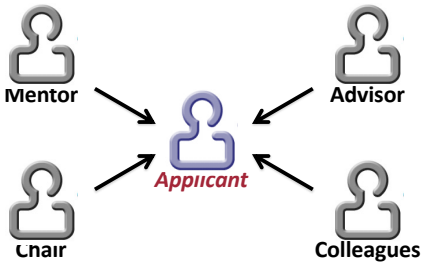
Year	Requested
1	
2	
3	
4	
5	
TOTAL	

Crafting a successful proposal requires good communication skills

Know your audience:

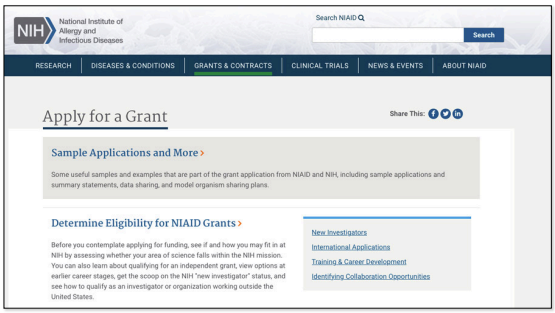
"The Reviewer at Work"

Obtain feedback



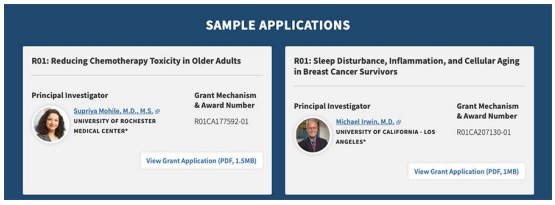
Ask someone who is not in your field to read your proposal!

The NIAID website has excellent resources on Grant Writing . . .



https://www.niaid.nih.gov/grants-contracts/apply-grant

NCI has sample applications in some research areas



Behavioral Research

Cancer Epidemiology

Healthcare Delivery Research

Implementation Science

For K awards

NIH **Mentored** Career Development Training Awards

Mentor(s) are essential: *Limited to 6 pages*

- Primary with whom you can meet weekly
- Co-mentors who bring unique expertise

Collaborators and consultants: *Limited to 6 pages*

External references: Required 3-5 letters

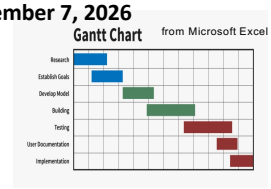
- Can not be from mentors or collaborators
- Letters must be submitted by application deadline
- References are identified in a **Cover Letter**

Planning Your Application—Start with a Timeline

Know your deadlines and work "backwards"

- Due date to NIH
- Due date to Research Office
- Due date to department
- Time for feedback
- **Complete draft by December 7, 2026**
- Session assignments

- Try use of a Gantt Chart
- Or a writing calendar



Above all, remember . . .

A funded proposal is a successful act of communication