Fostering New Researchers at NIH

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NIMH/NIH

May 12, 2018

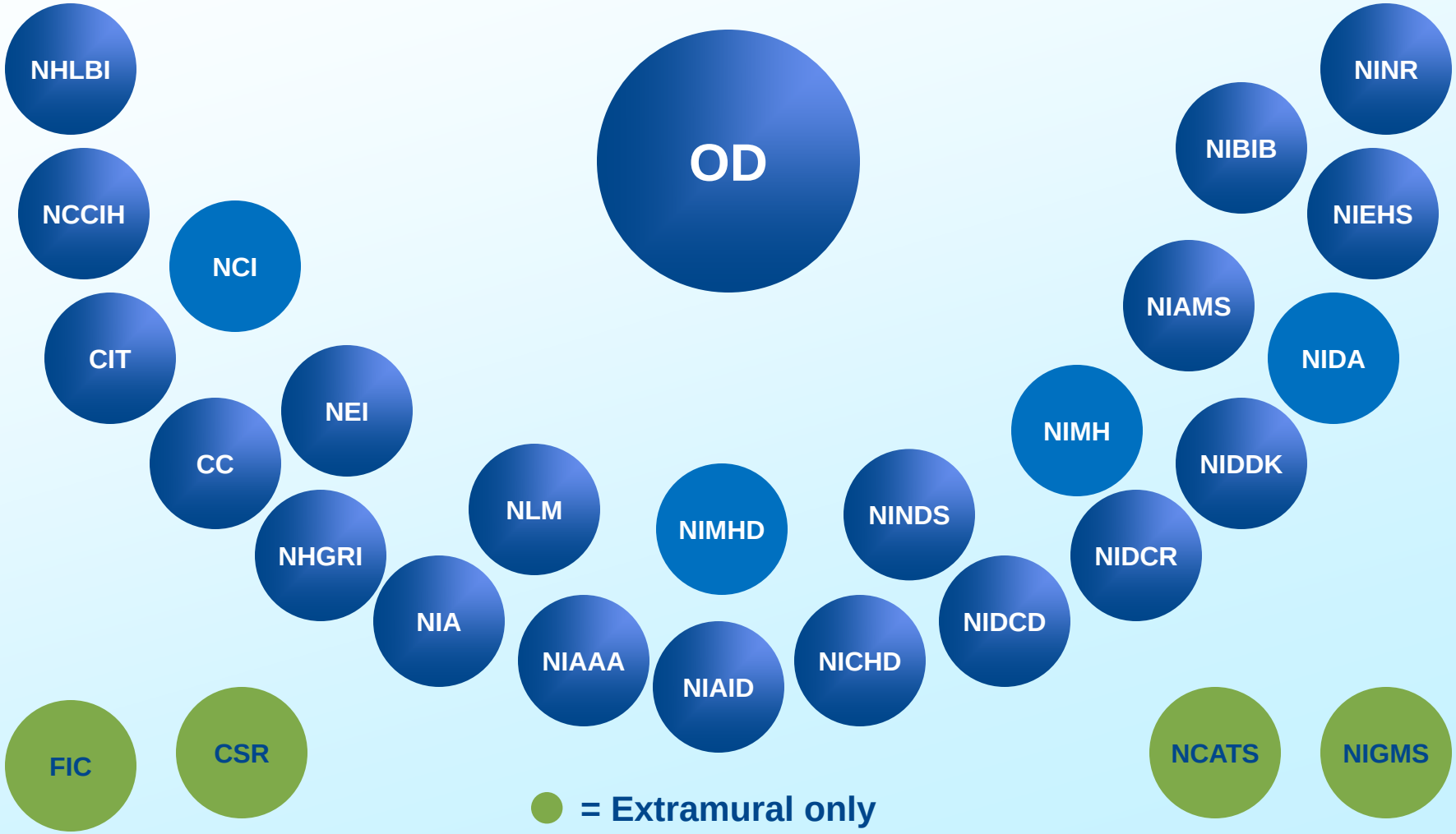
National Institute of Mental Health

National Institutes of Health

The mission of the NIH is to uncover new knowledge that will lead to better health for everyone by:

- conducting research in its own laboratories (**intramural**)
- providing support for research conducted by scientists in universities, medical schools, hospitals, and other research institutions throughout the country and abroad (**extramural**)
- training research investigators
- fostering the communication of medical information

NIH consists of 27 Institutes and Centers



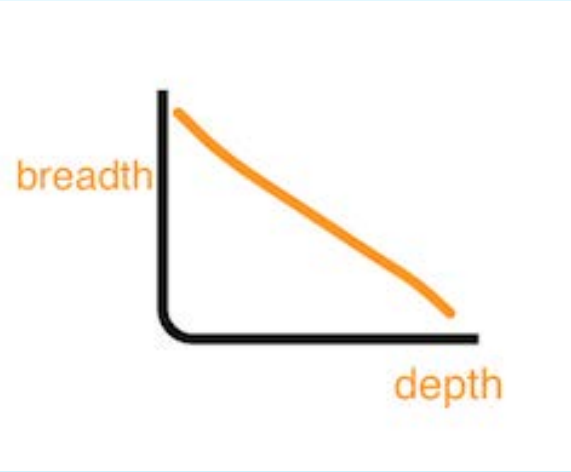
Take-Home Messages

- Reach out to a program officer prior to submitting a grant application to NIH
- Find a scientific mentor (preferably with NIH funding)
- Submit concept or draft for internal peer review

The NIH Extramural Team

Fostering the research

- Program (Science) Officers
  - Oversee a portfolio of funded research grants
  - Advise researchers who want to apply for NIH funding
  - Have access to additional knowledge not readily available to the field
  - Convene and attend meetings to identify research gaps
  - Engage in strategic planning 2-3 years in advance of funding initiatives



Program Officers can help you determine…

- The relevance of a research concept to Institute/Center mission and priorities
- The best research mechanism for your project (R01, R21, R34, K awards, etc.)
- The Funding Opportunity Announcement (FOAs: PAs, RFAs, etc.) under which to submit
- The Study Section or group to which the application would likely be assigned for review

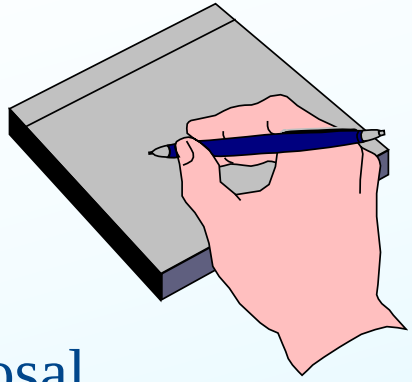
What is a PA, PAR, PAS, & RFA?

All are **Funding Opportunity Announcements** (FOAs) = A publicly available document by which a Federal agency makes known its intentions to award discretionary grants or cooperative agreements

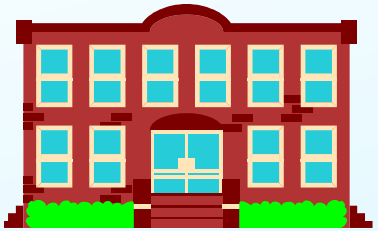
- Program Announcement (PA)
  - Identifies areas of increased priority and/or emphasis on particular funding mechanisms for a specific area of science
  - Usually accepted on standard receipt dates
  - Usually remain active for 3 years
  - PAR = a PA with special receipt, referral and/or review considerations
  - PAS = a PA that includes specific set-aside funds
- Request for Application (RFA)
  - Identifies a more narrowly defined area for which one or more NIH I/Cs have set aside funds for awarding grants
  - Usually has a single receipt date
  - Usually reviewed by a Scientific Review Group unique to the RFA

Brilliant idea

Brilliant proposal

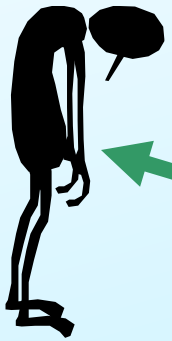


Institution submits

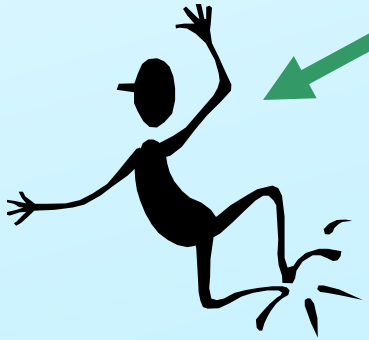


Revise proposal

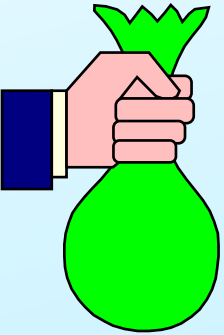
Join French Foreign Legion



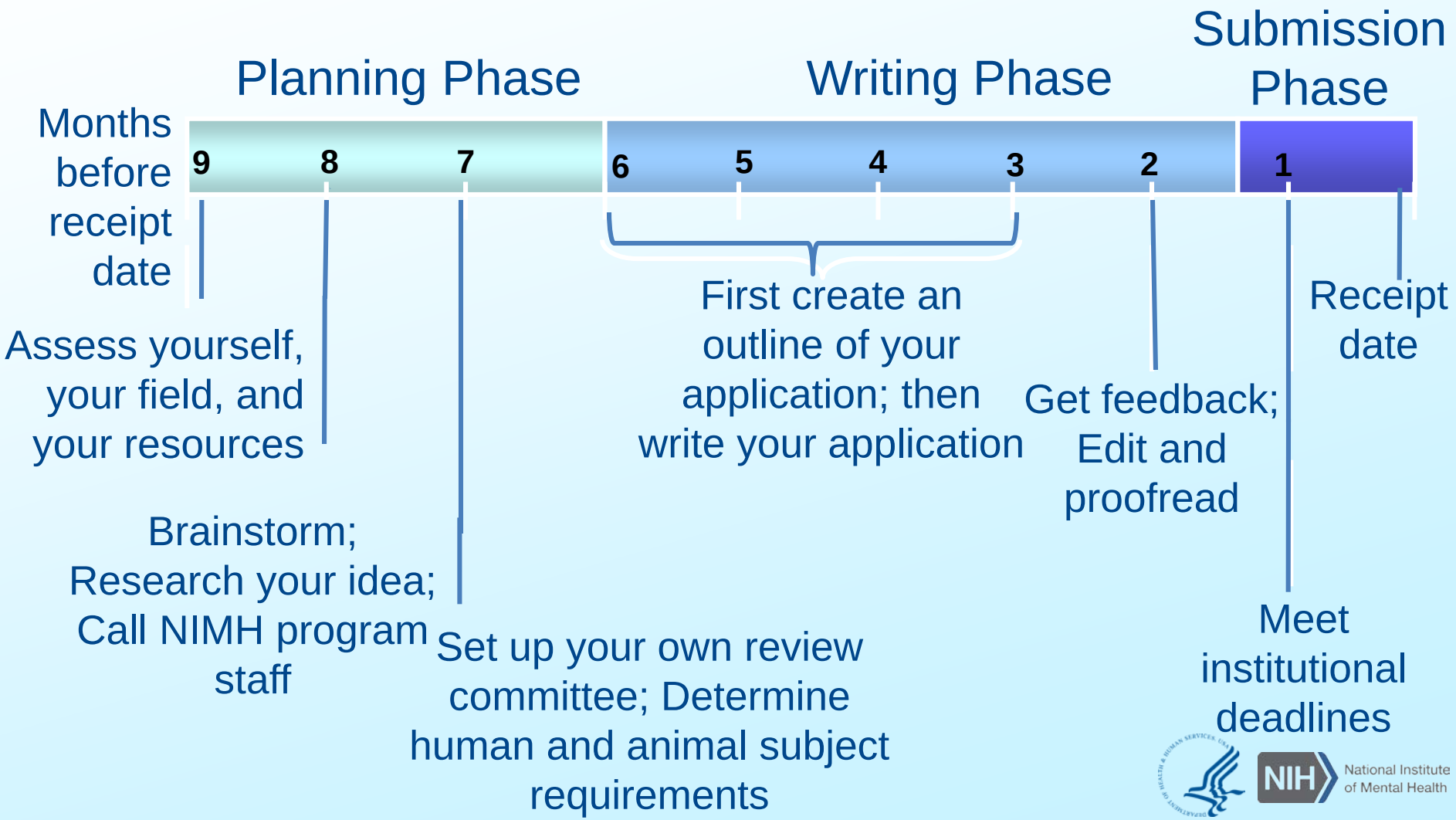
NIH reviews



Get funding



Preparation Timeline



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Tips for Obtaining NIH Funding

- Make use of NIH information resources
  - Search RePORTER for any currently funded projects within the same area
  - Talk to the appropriate Program Officer about your research plan.
- Talk with a scientific mentor
- Submit your concept or application to internal peer review (early and often)

Potential Funding Mechanisms

Career Development Awards

Research Grant Awards

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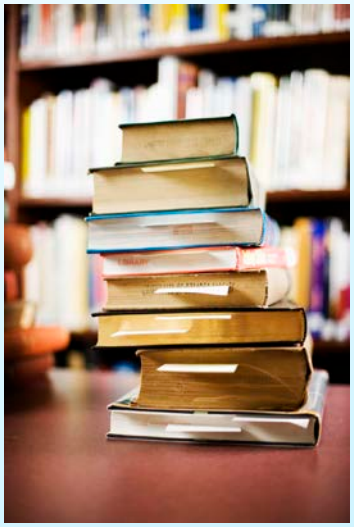
Purpose of NIH Career Development Programs

To provide protected time for individuals to further develop their research expertise.

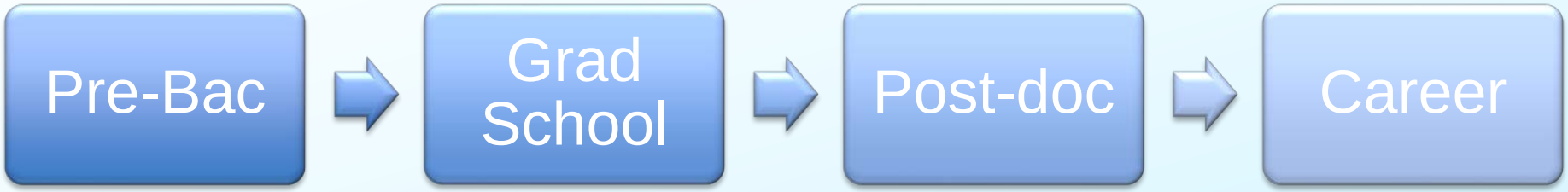


Career Development Programs

- Become a well-informed applicant
- Find out about NIH Institute and Center (IC) missions and programs www.nih.gov
- Find out which mechanisms each IC supports
- Contact appropriate NIH program/scientific or grants management staff
- Talk with potential mentors, collaborators, peers who have successfully acquired NIH funding
- Individual awards vs Institutional awards

Training and Career Timetable

Stage of Research Training/Career



Small Grant (R03
Exploratory Grant (R21)
Intervention Development Grant (R34)
Research Project Grant (R01)

Awards

Pre-Bac Institutional Training Grant (T34)

Predoctoral Institutional Training Grant (T32)

Predoctoral Individual NRSA (F31)

Predoctoral Individual MD/PhD NRSA (F30)

Postdoctoral Institutional Training Grant (T32)

Postdoctoral Individual NRSA (F32)

NIH Pathway to Independence (PI) Award (K99/R00)

Mentored Research Scientist Development Award (K01)

Mentored Clinical Scientist Development Award (K08)

Mentored Patient-Oriented RCDA (K23)

Mentored Quantitative RCDA (K25)

Independent Scientist Award (K02)

Midcareer Investigator Award in Patient-Oriented Research (K24)

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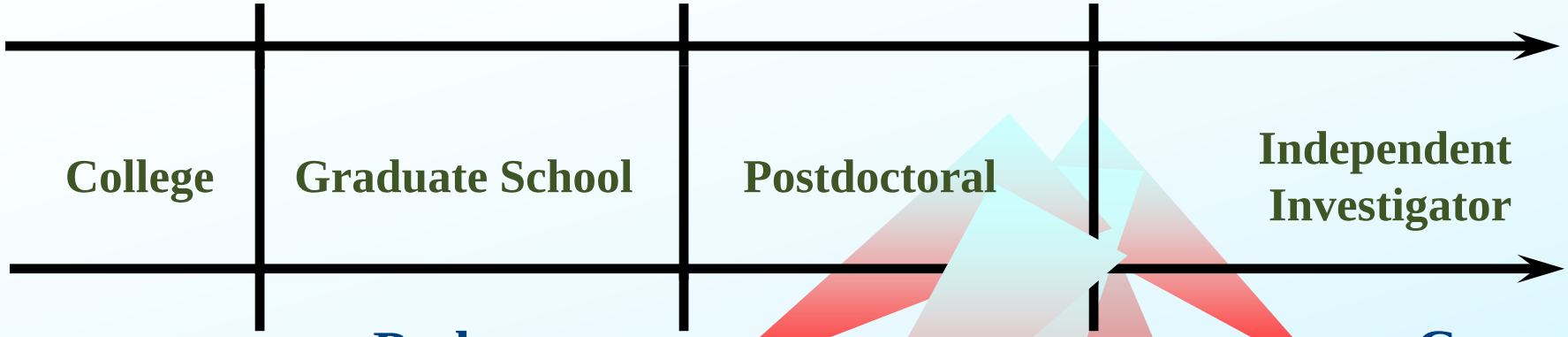
Mentored K Awards



Pathway to Independence (PI) Award (K99/R00)

Career Transition Award (K22)

Mentored Research Scientist Development Award (K01)

Mentored Clinical Scientist Development Award (K08)

Mentored Patient-Oriented Research Development Award (K23)

K Kiosk

Research Grants: R03 & R21

R03 – Small Grant

- Small one or two year grant
- Up to $50,000 per year in direct costs
- Appropriate for small studies or secondary data analyses

https://grants.nih.gov/grants/funding/r03.htm

R21 – Exploratory/Developmental Grant

- Two year grant
- Direct costs not to exceed $275,000 over the course of the two years
- Developmental and innovative

https://grants.nih.gov/grants/funding/r21.htm

Research Grants: R34

- Intervention development grant mechanism
- Up to 3 years with a budget not to exceed $475,000 over the course of the grant
- Pilot data is not required

https://grants.nih.gov/grants/funding/r34.htm

Academic Research Enhancement Award (AREA) Grants (R15)

- Supports research at eligible domestic institutions
- Up to 3 years with a budget not to exceed $300,000 over the course of the grant
- Pilot data is not required
- Domestic research only
- PI cannot be the PI on another NIH grant at the time of the award

https://area.nih.gov/

Research Grants: R01

- Most well known and most commonly used funding mechanism
- Provides up to 5 years of support with direct costs of up to $500,000 per year
- Need prior approval to submit an application with a budget over $500,000 in any year
- Need preliminary data

https://grants.nih.gov/grants/funding/r01.htm

Definition: Early Stage Investigator (ESI)

- A New Investigator (NI) who is within 10 years of completing the terminal research degree or is within 10 years of completing medical residency (or equivalent)
- Has not competed successfully for a substantial NIH-supported research project (R01)
- For multiple PIs, all PIs must meet requirements for ESI status
- Status applies only to R01s
- ESIs are also eligible for the shortened Review Cycle option available to NIs (only applies to non-AIDS-related grant applications)

https://grants.nih.gov/policy/early-investigators/index.htm

Common Problems in NIH Applications

- Not significant or not new research
- Weak rationale
- Low impact research
- Too ambitious
- Unfocused aims
- Career plan does not match research plan
- Lacks methodological rigor
- Little feasibility or preliminary data
- Little consideration of mechanisms
- Few publications or collaborators
- Lack of institutional support

Source: https://www.nimh.nih.gov/funding/grant-writing-and-application-process/common-mistakes-in-writing-applications.shtml

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Grant Writing Resources

- NIH Grant Writing Tips Sheets – links to different Institute's websites on how to write a grant (http://grants.nih.gov/grants/grant_tips.htm)
- Preparing Grant Applications (deainfo.nci.nih.gov/extra/extdocs/apprep.htm)
- Tips for New NIH Grant Applicants (www.nigms.nih.gov/Research/Application/Tips.htm)
- Grant Funding Process (www.niddk.nih.gov/fund/grants_process/grantwriting.htm)

Additional Resources: e-newsletters

- Sign up for Inside NIMH
  - Funding news for current and future NIMH awardees
  - Visit the Inside NIMH subscription page: https://www.nimh.nih.gov/news/e-mail-newsletters/index.shtml
- Sign up for Fogarty's Global Health Matters e-newsletter
  - Sign up at https://public.govdelivery.com/accounts/USNIHFIC/subscriber/new

Additional Resources: Websites

- NIH Research Portfolio Online Reporting Tools (RePORT)
  - Includes an electronic tool that allows users to search a database of NIH-funded research projects
  - http://projectreporter.nih.gov/reporter.cfm
- World RePORT website
  - Mapping database system which includes biomedical research studies in sub-Saharan Africa that are funded by 9 funding organizations
  - http://worldreport.nih.gov

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