AACR – NCI Program: Oversight and Grantsmanship

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NIH NATIONAL CANCER INSTITUTE

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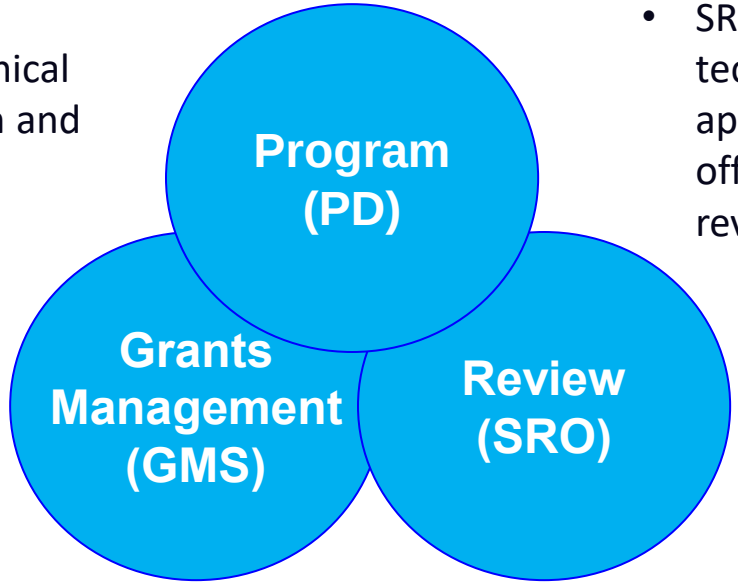
The NIH Extramural Team

With every submission, a team of experts will be assigned to your application

- Program officers/directors provide scientific and technical advice about your research and application. (Scientific)

- Grants Management Specialists manage the administrative and fiscal aspects of an award. (Business)



- SROs manage the scientific and technical review of applications. Provide the official documentation of the review. (Scientific)

Program Officer Responsibilities

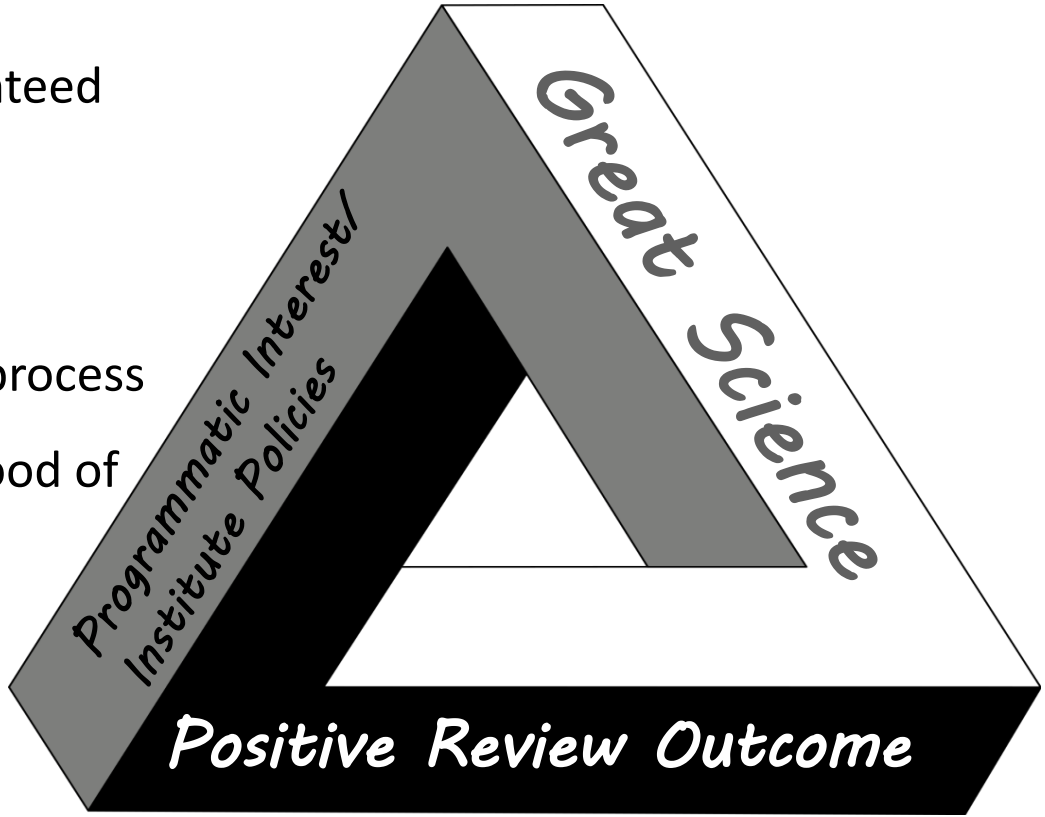
- Service
  - Point of contact for information
  - Liaisons and advocates for investigators
- Stewardship
  - Stewards of federal funds
  - Competing Applications - those being reviewed
  - Non-competing Applications - those already awarded
- Vision
  - Identify gaps and needs, make recommendations to NCI/NIH Leadership
  - Report major advances to NCI/NIH Leadership

Where to begin?

No secret formula …

No secret formula for guaranteed success.

Developing good habits and understanding the granting process can help increase the likelihood of success.



NIH GRANTS & FUNDING
NIH Central Resource for Grants and Funding Information

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Home » About Grants » How to Apply - Application Guide

GRANTS.NIH.GOV/GRANTS/HOW-TO-APPLY-APPLICATION-GUIDE.HTML

How to Apply - Application Guide

Use the application instructions found on this page along with the guidance in the funding opportunity announcement to submit grant applications to NIH, the Centers for Disease Control and Prevention, the Food and Drug Administration, and the Agency for Healthcare Research and Quality.

Prepare to Apply

- Systems and Roles
- Register
- Understand Funding Opportunities
- Types of Applications
- Submission Options
- Obtain Software

Write Application

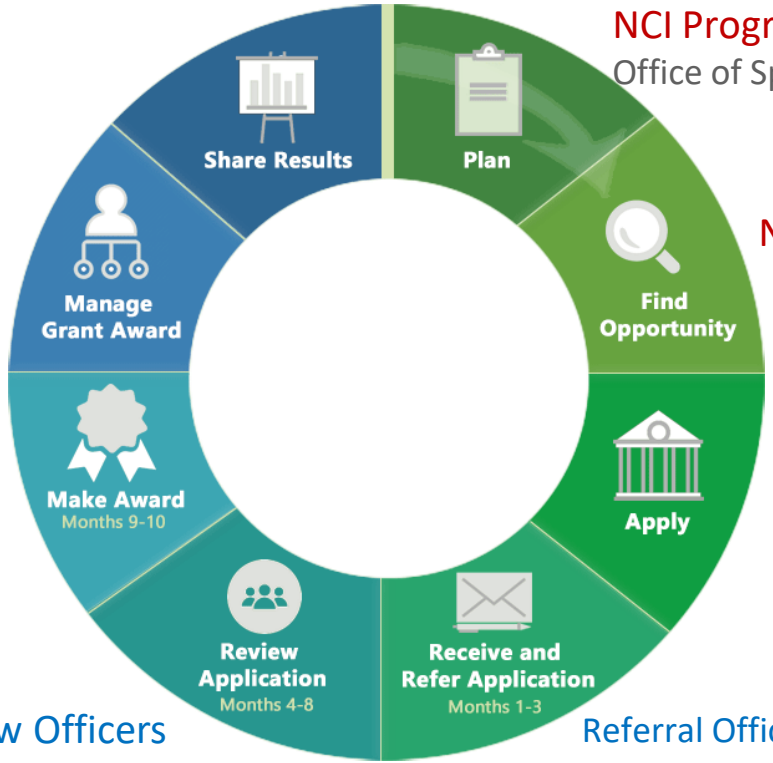
- Write Your Application
- How to Find Forms
- Develop Your Budget
- Format Attachments
- Rules for Text Fields
- Page Limits
- Data Tables
- Reference Letters
- Biosketches

Submit

- Submit, Track, and View
- How We Check for Completeness
- Changed/Corrected Applications
- Standard Due Dates
- Submission Policies
- Dealing with System Issues

FAQs

Application life cycle – who can help you:



NCI Program Officer,
Office of Sponsored Research

NCI Program Officer

NCI Program Officer

Grants Management Officer / Specialist

Institution

Could take 8+ months

Scientific Review Officers

Referral Officer → CSR Study Section, Review Officer
Institute → Program Officer

http://grants.nih.gov/grants/grants_process.htm

Grant Applications Have Many Components

- Title
- SF424 (R&R) Cover Page
- Project summary/abstract
- Project narrative
- Bibliography/references
- Facilities & other resources
- Equipment
- Authentication of key resources plan
- Biosketches
- Budget and justification
- Introduction
- Specific aims
- Research strategy
- Human subjects
  - Inclusion of women/minorities
  - Inclusion of children
  - Planned enrollment table
- Vertebrate animals
- Select agent research
- Multiple PI plan
- Consortium/contractual
- Letters of support
- Resource Sharing Plan; Data sharing
- Authentication of Key Biological and/or Chemical Resources
- Appendix

An NIH Program Officer can be contacted to help you:

- Before submission:
  - Planning, help in identifying FOA, FOA special requirements, policies, updates, etc.
  - Scientific priorities; science of proposed research
- After review:
  - Interpreting the summary statement
  - Advise on next steps
- Before the award:
  - Issues that need to be addressed/ JIT
- After the award:
  - Annual progress report monitoring (RPPR); changes to grant; carryover
  - Scientific advances, trends; advocate for science area

What a Program Officer cannot do for you …

- Tell you how to do your project.
- Provide exemptions for submission deadline or rules-violation.
- Change a study section assignment.
- Change funding policies.
- Change the requirements that must be fulfilled for an award to be issued.
- Write you a letter of recommendation as your PD.
- Talk to your Chairperson, or *anyone* outside of NIH except you, about your application, your Summary Statement, or your job/position status.

Successful applications have two core elements:

- Important Scientific Topic
  - Significant, novel, innovative science and question under study

- Good Grantsmanship
  - How the science is communicated

Grant Application Vs Research Articles

Prospective Mindset

Retrospective Mindset

Tip: Develop the appropriate writing skill set for grant applications and publications

Align application components with Review Criteria

Review Criteria

- Significance
- Investigators
- Innovation
- Approach
- Environment

Application Sections

- Research Aim & Purpose
- Bio-sketches
- Research Strategy
- Experimental Design/Research Methods & Analysis
- Resources

Tip: Make it easy for the reviewers to want to champion your work

General grant writing tips

- **PLAN** – timeline, message, visuals
- Get substantive input and feedback from mentors, colleagues
- **PLAN** – needed preliminary data
- Be explicit, clear, and concise
  - Help guide the reviewers
    - Don’t assume they know what you intend or will read between the lines
  - Use visuals – and detailed legends
  - Leave white space
- Discuss potential problem areas and possible solutions honestly
- Read instructions for the FOA and use the correct application forms

Characteristics of an outstanding grant application

- Strong significance, important problem in public health
- High potential impact
- High novelty and innovation
- Strong track record of applicant
- Clear rationale
- Relevant, supportive preliminary data
- Clear, focused approach that should lead to unambiguous results
  - Tip: Test your hypotheses
- Careful attention to details

Common mistakes in grant applications …

- Scientific errors
  - Ideas not new or original
  - Absence of acceptable scientific rationale
  - Lack of feasibility or missing preliminary data
  - Flawed approaches/ no pitfalls or alternative approaches
  - Lack of expertise in essential methodology
  - Too focused or too broad/ambitious and unfocused
  - Descriptive/incremental
- Grantsmanship errors
  - Not responsive to the FOA
  - Technical/ poor writing
    - Dense/ no figure legends
  - Lack of knowledge of published relevant work
  - Administrative
    - Budgets/Justifications don't match or are unrealistic and vague
    - Personnel too extensive for science proposed
    - Personnel effort is underestimated

Which mechanism R01 vs R21 vs R03 is right for you?

Have I talked to an NCI Program Director?

My ESI window is closing. Which mechanisms are be best to get maximum benefit ?

What are the current NCI pay lines?

How much **time** and **budget** is needed to effectively address my hypothesis?

How much preliminary data do I have to support the premise?

Does my institution offer pilot funding that would be more appropriate for this proposal?

Myths about the R21 mechanism

- Myth 1: New or junior investigators should use an R21 to establish a research career
  - Never the intended use. Different NIH funding institutes use the R21 in distinct ways
  - No consideration of career stage in funding decisions

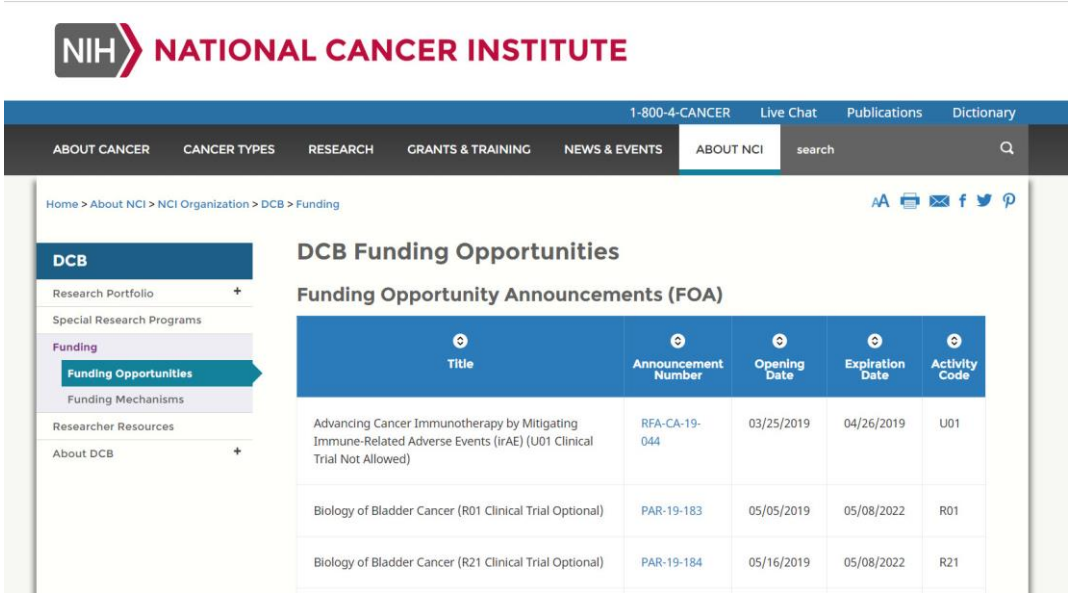
- Myth 2: R21 is less competitive than an R01; it's just a small R01 without preliminary data
  - More competitive, payline lower
  - More than 98% of successful R21 applications include some preliminary data.
    - Don't confuse "not required" with "not desired".

Thoughts about using different mechanisms

- *Do Not Use the R03 and R21 mechanisms as "mini-R01" applications.*
- *Do Use the R03 and R21 mechanisms to ask an important, clearly defined research question, relevant to the Funding Opportunity.*
  - Don't confuse "not required" with "not desired"
- Regardless of mechanism, convince the reviewers that you are uniquely poised to accomplish what you propose
- Stress your related experience with various elements of the proposal, your productivity, and your collaborators' experience
- Highlight your contributions to the topic through publications and abstracts
- Present evidence of feasibility (true for all mechanisms)
- Present a balanced knowledge of the literature

Funding Opportunities for Research – Basic Cancer Biology

https://www.cancer.gov/about-nci/organization/dcb/funding/opportunities



@NCICancerBio

Follow the Division of Cancer Biology on Twitter for basic cancer biology news & funding opportunities

NCI Extramural Funding for Cancer Training

Cancer Training Branch (CTB) Center for Cancer Training

Awards intended for all cancer researchers

- Institutional Training Grants
- Research Education Grants
- Individual Career Development Awards
- Transition Awards
- Fellowships

Chief: Nas Zahir, PhD
https://www.cancer.gov/grants-training/training/funding

Diversity Training Branch (DTB) Center to Reduce Cancer Health Disparities

Awards intended for students and scientists from populations underrepresented in biomedical sciences

- Research Education Grants
- Individual Career Development Awards
- Transition Awards
- Fellowships
- Research Supplements to Promote Diversity

https://www.cancer.gov/about-nci/organization/crchd/diversity-training/cure

Center for Global Health

Awards intended for mentored training in global cancer research

- Institutional Capacity Building and Mentored Training
- International Research Scientist Development Award

Program Director: Sudha Sivaram, DrPH, MPH
https://www.cancer.gov/about-nci/organization/cgh/research-training

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