

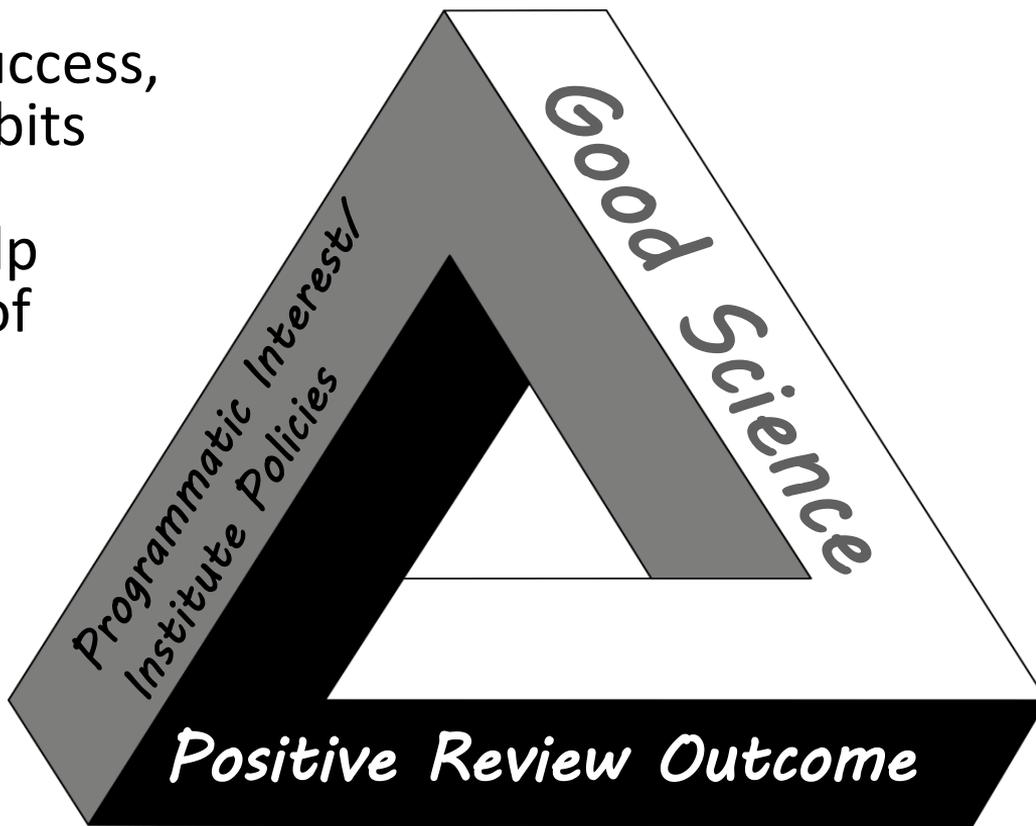
Fundamentals of 2-year grants

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Regardless of application mechanism ...

No secret formula for success, but developing good habits and understanding the granting process can help increase the likelihood of success.

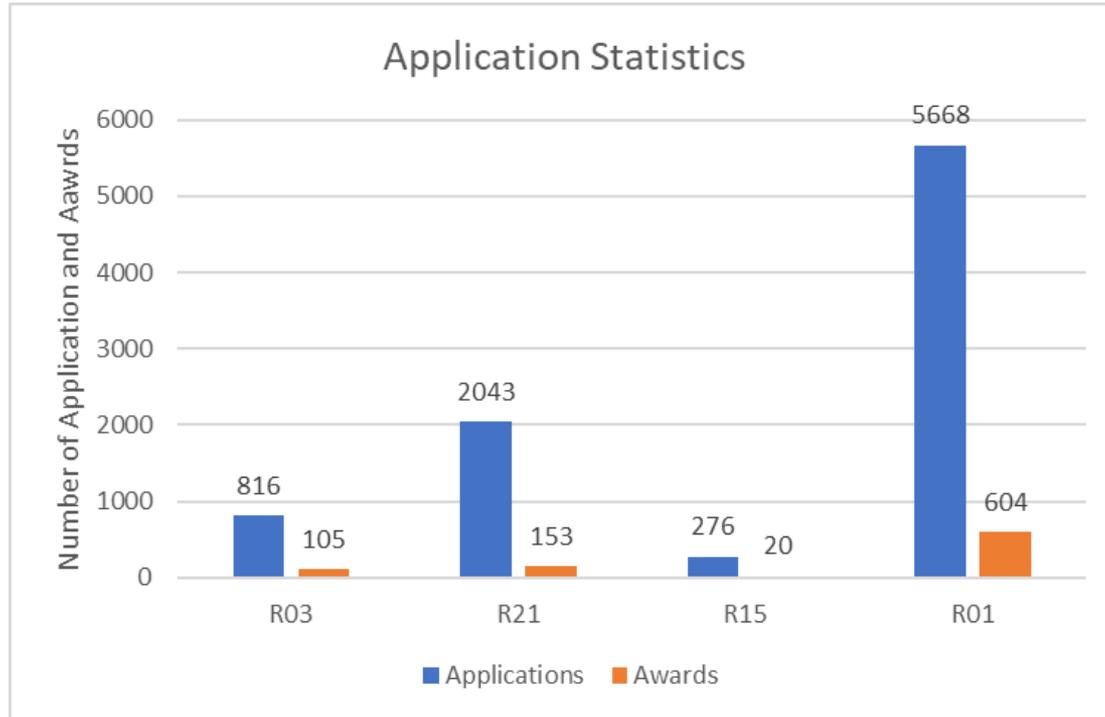


The Basics...

Mechanisms at a glance

	R03	R21	R15
Description	Supports a variety of project types, 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.	Encourages exploratory and developmental research projects by providing support for the early stages of project development. Sometimes used for pilot and feasibility studies.	Support small research projects conducted by undergraduate and/or graduate students and faculty in institutions of higher education that have not been major recipients of NIH research grant funds (<\$6 million)
Budget Period and Limits	<ul style="list-style-type: none"> Up to 2 years Direct costs up to \$50k per year 	<ul style="list-style-type: none"> Up to 2 years Direct costs up to \$275K over entire project period 	<ul style="list-style-type: none"> Up to 3 years Direct costs up to \$300K over entire project period
Research Strategy Pages	6	6	12
NCI Funding Policy (FY19)	Impact Scores \leq 25	7 th percentile pay line (13% policy reduction)	Impact Scores \leq 25
Renewable?	Not renewable	Not renewable	Renewable
Preliminary Data	Not required	Not required	Recommended
Funding Announcements	NCI omnibus	NCI Specific Program Announcements NIH Omnibus (Institute specific participation)	NIH Omnibus

Statistics by mechanism (FY17)



Represent only Type 1 (competing) applications

Recent changes to R21

- NCI no longer has an **Omnibus R21** funding opportunity
 - Change made in 2015
 - Low success rates?
 - Inappropriate use of mechanism?
 - Preference for specific topical funding opportunities

- NCI **Omnibus R03** funding opportunity remains

NCI Division of Cancer Biology (DCB) R21 FOAs

Title	FOA Number	Expiration
Microbial-based Cancer Therapy - Bugs as Drugs	PAR-19-194	05/08/2022
Modulating Intestinal Microbiota to Enhance Protective Immune Responses against Cancer	PAR-19-199	11/09/2021
Biology of Bladder Cancer	PAR-19-184	05/08/2022
Electronic Nicotine Delivery Systems (ENDS): Basic Mechanisms of Health Effects	PAR-17-475	06/28/2020
Age-related Microbiota Changes and their Implications in Chronic Disease Prevention, Treatment and Progression	PA-18-739	05/08/2021
Biology of Lung, and Head and Neck Preneoplasias	PA-17-460	01/08/2021
The Interplay of Cell Death Pathways in Cancer Cell Survival and Resistance to Therapy	PA-17-449	09/08/2020
Pilot and Feasibility Studies Evaluating the Role of RNA Modifications (the 'epitranscriptome') in Cancer Biology	PAR-16-177	07/17/2019
"High" or "Medium" Priority AIDS Research on Non-AIDS-defining or AIDS-defining Cancers	PA-16-425	09/08/2019
Inter-organelle Communication in Cancer	PAR-17-204	01/16/2020
Mechanisms of Alcohol-associated Cancers	PA-17-219	09/08/2020
The Role of Mobile Genetic Elements in Cancer	PAR-16-226	09/08/2019
Metabolic Reprogramming to Improve Immunotherapy	PAR-16-228	09/08/2019
Basic Research in Cancer Health Disparities	PAR-18-655	11/20/2020
Exploratory Grant Award to Promote Workforce Diversity in Basic Cancer Research	PAR-18-731	11/20/2020

NCI Division of Cancer Control and Population Sciences (DCCPS) R21 FOAs

Title	FOA #	Expiration
Mechanism for Time-Sensitive Drug Abuse Research	PAR-19-064	11/09/2021
Accelerating the Pace of Child Health Research Using Existing Data from the Adolescent Brain Cognitive Development (ABCD) Study	PAR-19-163	09/08/2021
End-of-Life and Palliative Care Health Literacy: Improving Outcomes in Serious, Advanced Illness	PA-18-499	05/08/2021
Electronic Nicotine Delivery Systems (ENDS): Population, Clinical and Applied Prevention Research	PAR-18-848	06/28/2020
Exploratory/Developmental Clinical Research Grants in Obesity	PA-18-720	05/08/2021
Testing Interventions for Health-Enhancing Physical Activity (R21/R33)	PAR-18-307	01/09/2021
U.S. Tobacco Control Policies to Reduce Health Disparities	PAR-18-674	06/16/2020
Nutrition and Alcohol-Related Health Outcomes	PA-17-213	05/08/2020
Perception and Cognition Research to Inform Cancer Image Interpretation	PAR-18-641	09/27/2019
Target Assessment, Engagement and Data Replicability to Improve Substance Use Disorders Treatment Outcomes (R21/R33)	PAR-18-086	09/08/2019
Integrative Research on Polysubstance Abuse and Addiction (R21/R33)	PAR-18-084	09/08/2019
Cancer-Related Behavioral Research through Integrating Existing Data	PAR-16-255	06/15/2019
Innovative Approaches to Studying Cancer Communication in the New Media Environment	PAR-18-639	06/14/2019

Should you consider applying for an R21 application?



Do you seek:

- Funds “...to introduce new ideas, model systems, tools, agents, targets, and technologies that have the potential to substantially advance research.” Exploratory, high-risk/high-reward research.
- Funds for more mainline research with projects that are smaller than would be possible in R01.
- Funds to generate preliminary data for a future R01.



Which mechanism is right for you?

Have I talked
to an NCI
Program
Director?



My ESI window is
closing. Which
mechanisms are
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?

Small Mechanism Myths

And realities

Myth 1: Use an R21 to establish a research career

- Reality:

- Never the intended use of the R21 mechanism.
- A 2-year award may not be sufficient time to complete a project and generate enough data for publication or sufficient data for an R01.
- If the work doesn't go as planned, little room for course correction.
- If funding is not sustained, may alter retention of personnel and expertise.
- No evidence the R21 creates a path to independent research.



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"Even my GPS says I'm going nowhere!"

Myth 2: The R21 mechanism is more appropriate for new or junior investigators.

- Reality:
 - Career stage is not considered when selecting R21 applications for funding or selective pay programs.
 - Early-stage investigators have a 10-year window of consideration.
 - Different funding NIH institutes use the R21 mechanism in distinct ways
 - Some use it predominantly for established investigators to complete a limited project such as a pilot or feasibility study.
 - Some use it to support new investigators.

Myth 3: An R21 is really just a small R01 without the preliminary data

- Reality:
 - R21 and R01s should propose different amounts of work, commensurate with the proposed budgets. Be realistic!
 - Research strategy is only 6 pages – need to be concise and focused.
 - More than 98% of successful R21 applications include some preliminary data.
 - Don't confuse “not required” with “not desired” – presenting preliminary data helps establish feasibility and your credibility.



"THE RESULTS ARE FAR FROM CONCLUSIVE, BUT IT DOES CAUSE CANCER IN HUMANS."

Myth 4: The R21 mechanism is less competitive than an R01, and easier to get.

- Reality:
 - The R21 mechanism is often more competitive than the R01.
 - Paylines typically lower (NCI FY19, 7th percentile).
 - Mechanism not typically considered for discretionary or selective pay programs.

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"It's important to remember that correlation does not imply causation. Besides, we all know it was Brian."

What about the R03 mechanism?

- Same challenges apply as with the R21 mechanism:
 - Shorter Research Strategy, requires concise, tightly focused research plan.
 - Limited budget and short time (2-years); not renewable.
 - Not percentiled; payline by overall impact score.
 - No consideration of career stage during review or when considering funding.
 - Common myth “R03 is *only* for secondary analysis.”
 - Not typically considered for funding through discretionary processes.

Common Mistakes in R21 and R03 Applications

- Scientific errors
 - Ideas not thought through and thus inappropriate for the mechanism
 - Lack of feasibility
 - Outdated approaches
 - Lack of expertise
 - Too focused or too broad/ambitious
- Grantsmanship errors
 - Technical/ poor writing
 - Budgets/Justifications don't match or are unrealistic and vague
 - Personnel too extensive for science proposed
 - Personnel TBD

Elements of Successful R21 or R03 Applications...

- The big picture is scientifically exciting or needed and, if successful, useful to the community
 - Great ideas, solid well-reasoned rationale
- A defined question and purpose appropriate for the mechanism
- Perceived doable within the 2-year time frame and with the allotted budget.
 - Demonstration of feasibility, appropriate expertise and resources on hand
- Find successful applications using the NIH Research Portfolio online tool at: <https://projectreporter.nih.gov/reporter.cfm>

The R15 Mechanism

NIH Research Enhancement Award mechanism

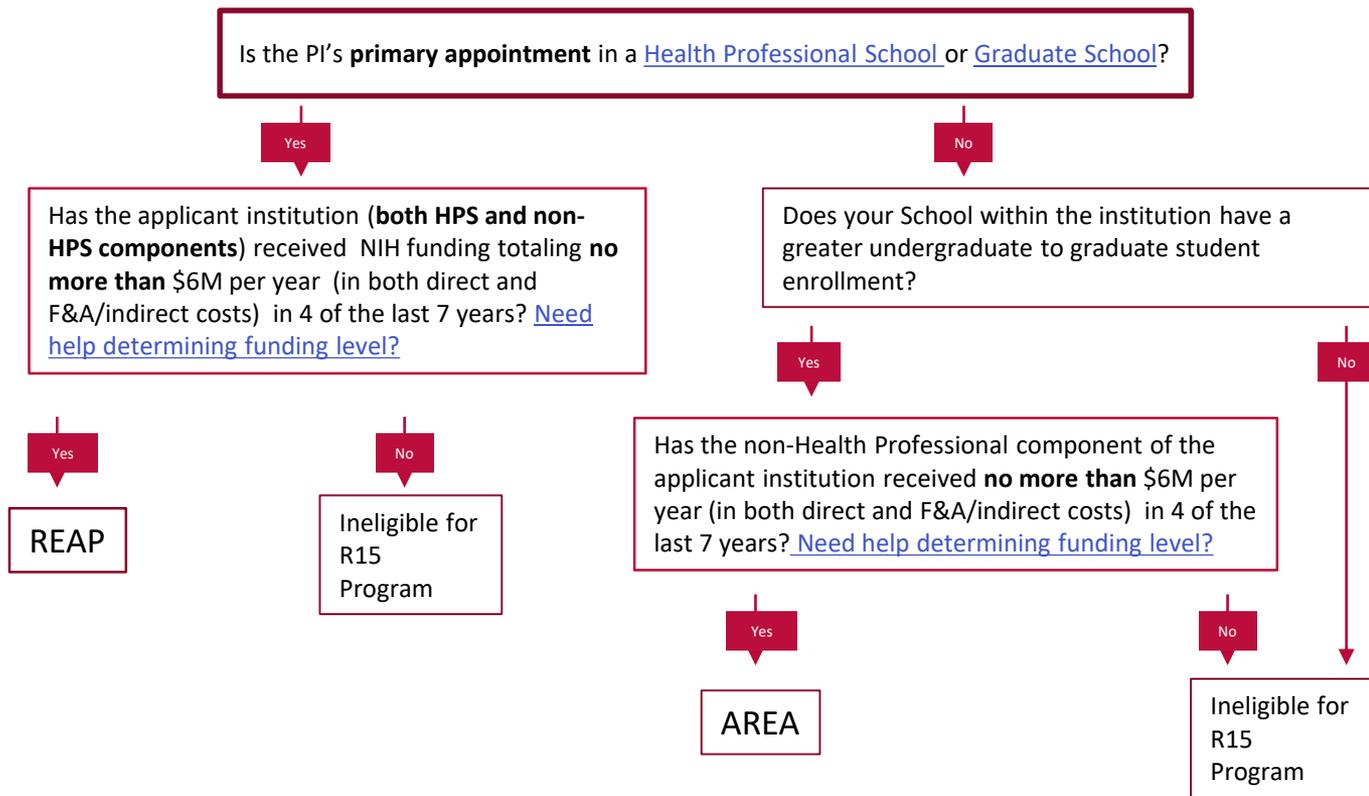
NIH Research Enhancement Award (R15)

- Supports small-scale research projects at educational institutions that provide baccalaureate or advanced degrees for a significant number of the Nation's research scientists but that have not been major recipients of NIH support (less than \$6M).
- Two programs (different investigator and institution eligibility requirements):
 - Academic Research Enhancement Area (AREA) for Undergraduate-focused institutions
 - [PAR-18-714](#) (Clinical Trial Not Allowed)
 - [PAR-19-133](#) (Clinical Trial Required)
 - Research Enhancement Award Program (REAP) for Health Professional Schools and Graduate Schools.
 - [PAR-19-134](#) (Clinical Trial Not Allowed)
 - [PAR-19-135](#) (Clinical Trial Required)

NIH Research Enhancement Award (R15)

- The goals of the R15 are to:
 - support meritorious research
 - expose students to research
 - Research team should include undergraduate and/or graduate students
 - strengthen the research environment of the institution.
- Project period limited to 3 years and direct costs of \$300K for entire project period.
- This activity code uses multi-year funding authority, i.e., all costs up front.
- Grant is renewable.

Is AREA or REAP right for me?



Happy to take QUESTIONS?



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