

# Writing a Grant Application

## F99/K00 Webinars

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# How can a Training or Career Development Award Help You?

It supports the development of your research career:

- Facilitates movement from now to where you want to be in 3-5 years
- Develops your overall scientific career
- Research is just one element (compared to a research grant – e.g. R01- which is all about the research)

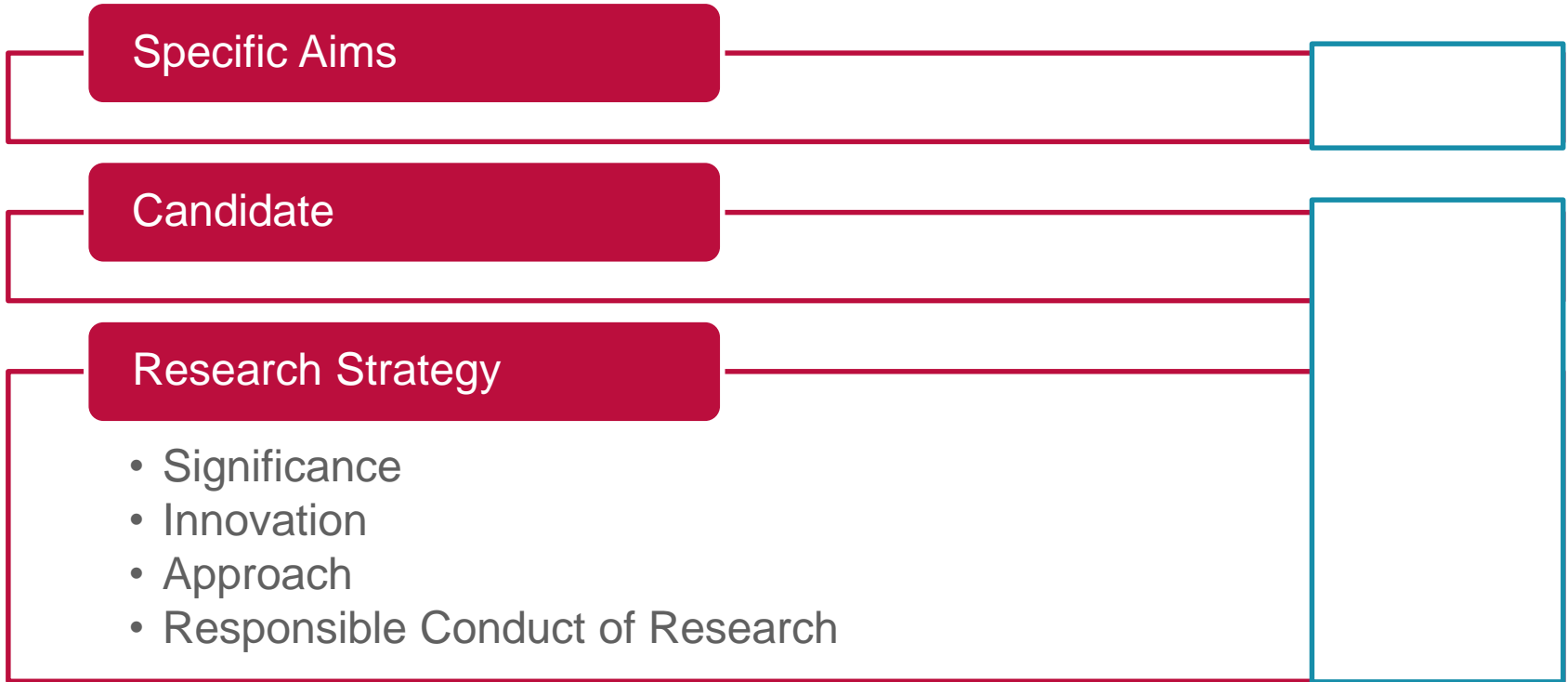
Factors to consider in selecting the right funding opportunity:

- Stage in career development
- Research focus
- Prior research experience including publications
- Level of institutional commitment
- Needs of the investigator
- Effort that can be committed
- Citizenship status

Provisions & Requirements:

- Provides up to 5 years salary and research support
- Mentored awards require mentors & strong institutional commitment
- Some awards have specific effort commitment e.g. of  $\geq 75\%$  effort / 9 calendar months
- US citizen or permanent resident (except F99 and K99)
- Letters of recommendation, submitted electronically

# Structure of a Grant Application



# Specific Aims & Applicant sections

- Specific Aims

- The **most important page** in the grant – the only page that non-assigned reviewers may read
- Written for a scientist
- Uses short declarative sentences
- Does not include references, jargon or acronyms
- Clearly states the hypothesis
- Ensures that the aims **test** the hypothesis
- Is not be technology driven
- Elements are interdependent, not dependent

- Applicant

- Tell the story of your training path, and goals
- Focus on the “why” not the “what” you did
- Include information not in biosketch
- Put your best self forward
- Prepare a “Training Program”
  - Select mentors and/or an advisory committee
  - Self identify deficiencies in your training & address with workshops and courses
  - Use the grant to augment your training
  - Indicate how the grant will maximize your chances of becoming an independent investigator

# Research Strategy

- Introduction

- Concise
- Is not a literature review
- Leads the reader to the hypothesis
- Demonstrates the “conversation” in the field
- Demonstrates a critical question is being asked and (hopefully) answered
- Focuses everything on the hypothesis

- Approach

- Demonstrates ability perform work
- Shows PI’s contribution to work
- Shows feasibility of experiments
- Must be “doable” in requested period of funding
- Is hypothesis-based, not tech driven
- Is innovative and feasible - if very innovative, MUST have preliminary data to show it is feasible
- Is NOT descriptive or a “fishing expedition”
- Is FOCUSED and not a multi-aim proposal to conquer the world
- Includes controls
- Includes a section on statistics
- Discusses potential pitfalls and proposes alternatives

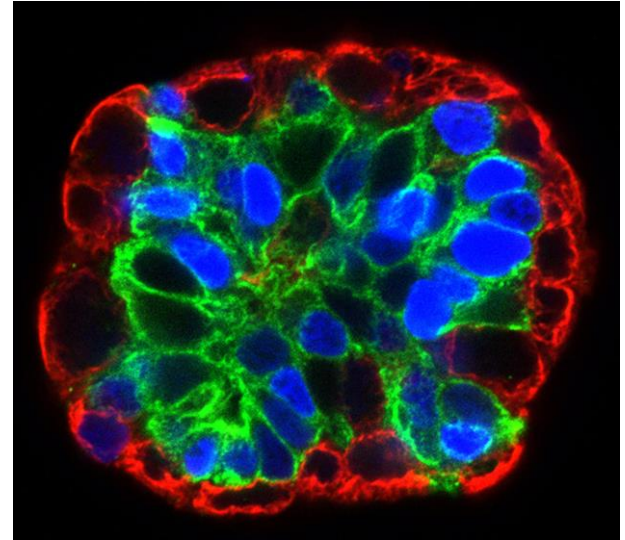
# Flaws that are often Fatal

## Big Picture

- Lacks relevant significance
- Not innovative
- Not hypothesis-driven
- Poorly written

## Experimental Approach

- Overly ambitious ...
- ... Too narrow
- Dependence of one aim on another
- Lacks sufficient detail and statistical analyses
- Lacks anticipated results and alternative strategies



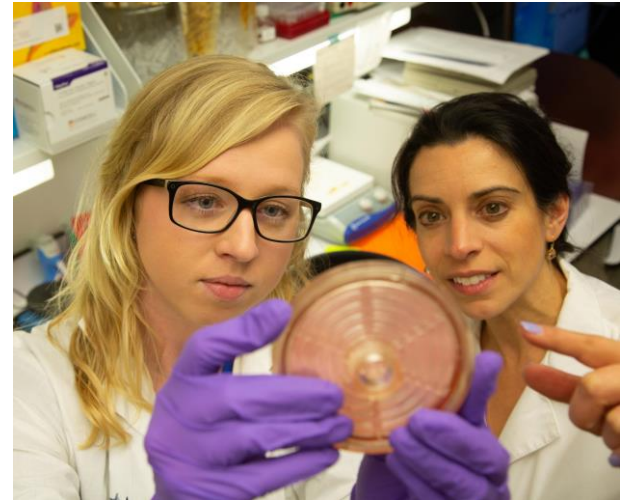
# Common Issues that Limit Enthusiasm from Reviewers

Training plan is too generic:

- If you can put someone else's name in the training plan then it is not specific to the applicant
- The more detail the better (who, what, where, when)

Reference letters not glowing:

- Hint: All letters need to be "outstanding"
- Strategize with your sponsor concerning letters
- Ask people who know you, know your work and who are positive people and good writers



# Thoughts on Review

- Know the Study Section
- Appreciate that they are busy people with full time jobs
- Be considerate of their time
- Make their job as easy as possible with clarity, clear language, good structure e.g. sub-headings, etc
- Provide them the information they need for writing their review





# What has been funded

Enter mechanism

Filter by Institute/Center that is administrating or funding

The screenshot shows the NIH RePORTER website interface. At the top, there is a navigation bar with links for HOME, ABOUT RePORT, FAQs, GLOSSARY, and CONTACT US. Below this is a search bar and a 'RePORTER' logo. The main content area is titled 'NIH RePORTER' and includes a 'FIND PROGRAM OFFICIALS OR SIMILAR PROJECTS' button. The form is divided into several sections: 'RESEARCHER AND ORGANIZATION' with fields for Principal Investigator (PI) / Project Leader, Organization, Department Type, and Organization Type; 'TEXT SEARCH' with a search box and options for search criteria; 'PROJECT DETAILS' with fields for Project Number/Application ID, Program Officer (PO), and dates; and 'Agency/Institute/Center' with a dropdown menu. A red arrow points from the text 'Enter mechanism' to the 'Funding Mechanism' field. Another red arrow points from the text 'Filter by Institute/Center that is administrating or funding' to the 'Agency/Institute/Center' dropdown menu, which is currently open and showing a list of NIH institutes and centers.

# What has been funded

A list of previously funded grants that you can explore



U.S. Department of Health & Human Services

NIH Research Portfolio Online Reporting Tools (RePORTER)

Search [ ]

HOME | ABOUT RePORTER | FAQs | GLOSSARY | CONTACT US

QUICK LINKS RESEARCH ORGANIZATIONS WORKFORCE FUNDING REPORTS LINKS & DATA

Home > RePORTER > Search Results

RePORTER Login | Register | RePORTER Manual System Health: GREEN

### Search Results

Back to Query Form Save Query Share Query

Export All Projects

PROJECTS PUBLICATIONS PATENTS CLINICAL STUDIES DATA & VISUALIZE MAP NEWS & MORE

There were 49 results matching your search criteria. Records per page: 25. Show/Hide Search Criteria

Click on the column header to sort the results. Page 1 of 2 Next Last

Application Type: Act. Activity Code: Project. Admin IC: Serial No.: Year: Support Year/Supplement/Amendment

T	Act	Project	Year	Sub #	Project Title	Contact PI/ Project Leader	Organization	FY	Admin IC	Funding IC	FY Total Cost by IC	Similar Projects
	5	K99	CA230195	02	INTEGRATIVE FRAMEWORK FOR IDENTIFYING DYSREGULATED MECHANISMS IN THE TUMOR-IMMUNE MICROENVIRONMENT	AZIZ, ELHAM	SLOAN-KETTERING INST CAN RESEARCH	2019	NCI	NCI	\$134,632	
	5	K99	CA228387	02	GENETIC AND EPIGENETIC STRATEGIES FOR THE ACQUISITION OF TELOMERE MAINTENANCE IN HUMAN CANCER CELLS	BARTHEL, FLORIS	JACKSON LABORATORY	2019	NCI	NCI	\$115,407	
	1	K99	CA228353	01A1	INVESTIGATION OF SUB-LINEAGES IN PULMONARY NEUROENDOCRINE CELLS AND IDENTIFICATION OF THE CELLS OF ORIGIN OF SMALL CELL LUNG CANCER	CHEN, HUANHUAN	WEILL MEDICAL COLL OF CORNELL UNIV	2019	NCI	NCI	\$83,988	
	1	K99	CA234097	01A1	TARGETING ZDHHC13-ACTIVATED PALMITOYLATION FOR MELANOMA TREATMENT	CHEN, SHUYANG	BOSTON UNIVERSITY MEDICAL CAMPUS	2019	NCI	NCI	\$101,368	
	5	K99	CA228396	02	INVESTIGATING FUNCTIONAL SITES IN PROTEIN KINASES AS TARGETS FOR CANCER MUTATIONS AND NOVEL DRUGS	CREIXELL, PAU	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	2019	NCI	NCI	\$132,927	
	5	K99	CA218686	02	PROPIONATE METABOLISM AS AN ESSENTIAL METABOLIC ADAPTATION FOR TUMOR PROGRESSION	DA SILVA GOMES, ANA	WEILL MEDICAL COLL OF CORNELL UNIV	2018	NCI	NCI	\$84,350	
	1	K99	CA241370	01	DEFINING AND TARGETING THE METABOLIC LANDSCAPE IN ACUTE MYELOID LEUKEMIA	DI MARCANTONIO, DANIELA	RESEARCH INST OF FOX CHASE CAN CTR	2019	NCI	NCI	\$108,686	
	5	K99	CA230192	02	CHARACTERIZATION OF MICROBIAL AND HOST REQUIREMENTS FOR CALONIC BIOFILM ASSEMBLY AND BIOFILM-MEDIATED COLON TUMORIGENESIS	DREWES, JULIA	JOHNS HOPKINS UNIVERSITY	2019	NCI	NCI	\$89,503	
	5	K99	CA228342	02	ALTERED MRNA SPLICING DEPENDENT ON MUTANT P53 IDENTIFIES NOVEL THERAPEUTIC VULNERABILITY IN PANCREATIC CANCER	ESCOBAR HOYOS, LUISA	SLOAN-KETTERING INST CAN RESEARCH	2019	NCI	NCI	\$102,057	
	1	K99	CA237618	01A1	UNDERSTANDING METHIONINE METABOLISM AND ITS THERAPEUTIC POTENTIAL IN CANCER	GAO, XIA	DUKE UNIVERSITY	2019	NCI	NCI	\$96,168	
	1	K99	CA240881	01	LIGHT-SHEET MICRO-ASPIRATION MICROSCOPY FOR THE ISOLATION AND ANALYSIS OF RARE TUMOR CELLS FROM INTACT CLINICAL SPECIMENS	GLASER, ADAM K	UNIVERSITY OF WASHINGTON	2019	NCI	NCI	\$160,256	
	1	K99	CA241287	01	CHARACTERIZATION OF NOVEL SUBTYPES IN B PROGENITOR ACUTE QU ZHAOCHI	GUO, ZHAOCHI	ST. JUDE CHILDREN'S RESEARCH HOSPITAL	2019	NCI	NCI	\$89,999	
	5	K99	CA225633	02	DETERMINING STRUCTURAL FEATURES OF A COLLAGEN LYSYL HYDROXYLASE THAT PROMOTES LUNG CANCER METASTASIS	GUO, HOU-FU	UNIVERSITY OF TX MD ANDERSON CAN CTR	2019	NCI	NCI	\$111,834	
	1	K99	CA237861	01A1	DEVELOPING MULTIPLEXED MICROENVIRONMENTAL SENSORS	HAO, LIANGLIANG	MASSACHUSETTS INSTITUTE OF	2020	NCI	NCI	\$101,334	

For additional information on training and career development opportunities offered by NCI, please visit [cancer.gov/cct](https://www.cancer.gov/cct)



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