

# Grant Writing Tips and Tricks

*Lillian Kuo, Ph.D.*

*Program Director, Division of Cancer Biology, NCI*

*Email: [Lillian.Kuo@nih.gov](mailto:Lillian.Kuo@nih.gov); Twitter: @NCICancerBio*

# Grant Writing Tips and Tricks

1. Elements of Your R01 Application
2. Training and Career Development Awards
3. Resources for You!

# Grant Writing Tips ~~and Tricks~~

1. Elements of Your R01 Application
2. Training and Career Development Awards
3. Resources for You!



Warning: This information is generalized and not comprehensive. Please contact your Program Officer for individual-level guidance.

# Elements of Your R01 Application

- Draft Your Specific Aims Page
- Assemble Your Team
- Research Strategy Tips

# Draft Your Specific Aims Page

- Make a good first impression, the Specific Aims page is read first
- A central hypothesis will anchor your Specific Aims to a common scientific question or objective
- Better to have depth over breadth
- Specific Aims should be complementary and not inter-dependent
- Share your draft Specific Aims page with mentors, colleagues, co-investigators, collaborators, and your Program Officer

# Draft Your Specific Aims Page

## Know your audience, the scientific peer-review panel:

- Would they review the proposed project as tackling an important problem in a significant field?
- Would they view the Specific Aims as capable of opening up new discoveries in the field?
- Would the reviewers regard the work as new and unique?
- Would they view the Specific Aims as likely to exert a significant influence on the research field(s) involved?
- Are the Specific Aims written clearly and are they easy to understand?

# Assemble Your Team

- Contact PI vs. multi-PI (MPI) vs. Co-Investigator distinctions
- For a multi-PI (MPI) application, each MPI should have complementary expertise
- Strong letters of support demonstrating intellectual buy-in for the project
- Engage your Biostatistician and/or Bioinformatician from the initiation of your experimental design through the interpretation of the data and alternate approaches sections

# Research Strategy Tips

- Structure: Significance, Innovation, or Approach
- Significance: How will my research move the field forward
- Innovation: Both conceptual and technical
- Approach:
  - Your experimental design should tie back to your overarching hypothesis and specific aims
  - Avoid writing a list of experiments, instead provide a roadmap to how you will test your hypothesis and specific aims
  - As you write the approach, reevaluate your hypothesis, aims, and title to make sure they are cohesive and reflect the scientific goals

# Training and Career Development Awards

# Training and Career Development Opportunities



<https://www.cancer.gov/grants-training/training/funding>

Michael Schmidt, Ph.D., [mschmidt@mail.nih.gov](mailto:mschmidt@mail.nih.gov)

# Types of NCI Career Development (K) Awards

- Different types of K awards for different career stages and trajectories
- K08: provide "protected time" (3-5 years) to support didactic study and/or mentored research for individuals with clinical doctoral degrees
- K22 and K99/R00: help outstanding mentored, non-independent investigators in transitioning to research independence

# K99/R00: Pathway to Independence Award

- **Objective:** To help outstanding postdoctoral researchers complete needed, mentored career development and transition in a timely manner to independent, tenure-track or equivalent faculty positions.
- **Eligibility:**
  - U.S. citizens and non-U.S. citizens (@domestic institutions)
  - Less than **4 years** of postdoctoral research training
  - Cannot have held an independent faculty or tenure-track position
- **Award:**
  - **Mentored Phase (K99)** (1 - 2 years):  
salary: up to \$100K/year; fringe benefits; research support: 30K/ year
  - **Independent Scientist Phase (R00)** (up to 3 years):  
salary, fringe benefits, research support: \$249K/ year (total cost)

# NCI Transition Career Development Award (K22)

- **Objective:** facilitates the transition of investigators in mentored, non-independent cancer research positions to independent faculty cancer research positions. The K22 provides protected time for the initial 3 years of the first independent tenure-track faculty position.
- **Eligibility:**
  - U.S. citizens and Permanent Residents (@domestic institutions)
  - **2-8 years** of postdoctoral research training
  - Cannot have held an independent faculty or tenure-track position
- **Research:** all areas of cancer research

# Critical Elements for K Applications

- **Candidate:** motivated, well-trained, productive
- **Mentor(s):** strong mentoring and funding track record, highly qualified, committed to support the candidate
- **Career Development/Training Plan:** meaningful training in research and professional development
- **Research Strategy:** innovative, good training platform/ vehicle for transition to independence (high feasibility/ high impact; niche for applicant's own lab)

# Resources for You

# Subscribe to Email Alerts

<https://nexus.od.nih.gov/all/>



U.S. Department of Health & Human Services | National Institutes of Health



extramural  
**NEXUS**

Search ...

[NIH Grants & Funding](#) | [Blog Policies](#) | [Contact](#) | [RSS Feeds](#)

**SUBSCRIBE**

[HOME](#)   [OPEN MIKE](#)   [MORE TOP STORIES](#)   [NEW RESOURCES](#)   [TIPS BEFORE YOU SUBMIT](#)   [YOU ASK, WE ANSWER](#)



## OPEN MIKE

*Helping connect you with the NIH perspective, and helping connect us with yours.*

### **Reaffirming NIH's Commitment to Workforce Diversity**

By Marie A. Bernard and Mike Lauer

November 3, 2021



# Search for Funding Opportunities

<https://grants.nih.gov/funding/index.htm>

## Funding

NIH offers funding for many types of grants, contracts, and even programs that help repay loans for researchers. Learn about these programs, as well as about NIH's budget process, grant funding strategies, and policies, and more.



### Find Grant Funding

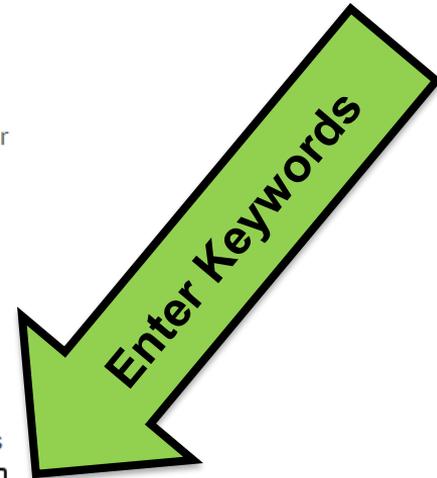
(NIH Guide to Grants and Contracts)

The NIH Guide for Grants and Contracts is our official publication for NIH grant policies, guidelines and funding opportunities. We publish daily, and issue a table of contents weekly. [Learn more](#) about the NIH Guide and [subscribe today!](#)

[View all Parent Announcements](#)

(for unsolicited applications)

Search for funding opportunities and notices



# Early Stage Investigator (ESI) Status

- Early Stage Investigator (ESI) and New Investigator (NI) are different
- Different NIH Institutes (ICs) have different policies on ESI vs. NI
- You can request an extension (e.g., COVID lab shutdowns) to your ESI eligibility period through eRA Commons via an ESI Extension request button in the Education section of their Personal Profile.
- Detailed info available at **NOT-OD-19-125**:  
<https://grants.nih.gov/grants/guide/notice-files/NOT-OD-19-125.html>

# Contact Your Program Officer/Director

## Your Program Officer will help you:

- To identify the right type of grant program and/or funding opportunity for you and your research
- To review, develop and draft Specific Aims page
- To discuss the summary statement and outcome of review
- To strategize resubmission (A1) options and timing
- To talk about progress or scientific and administrative issues that arise with the grant after award

# Contact Your Program Officer/Director

<https://reporter.nih.gov/matchmaker>



## Matchmaker

Enter abstracts or other scientific text to find potential Program Officials, ICs, and review panels for your research. ?

15,000 characters left

- Similar Projects
- Similar Program Officials

Reset

Search

# Questions Welcome!

Email: [Lillian.Kuo@nih.gov](mailto:Lillian.Kuo@nih.gov)

Twitter: [@NCICancerBio](https://twitter.com/NCICancerBio)