

# With All These R's, Which One Is Right for Me?

Wen-ying Sylvia Chou, PhD, MPH, NCI  
Amy McQueen, PhD, Washington University

August 10, 2017

# Common Grant Mechanisms

- R03 – Small Research Grants
- R21 – Exploratory/Developmental Grants
- R13 – Conference Grants
- R15- “AREA” grants (teaching institutions w/ limited NIH funding)
- R01 – Research Projects
- K-Awards– Training Awards (e.g. NCI K01, K07)
- R41/R42/R43/R44 - SBIR/STTR
- Ps, Us, other bigger mechanisms

<http://deainfo.nci.nih.gov/flash/awards.htm>

# R03s: Small Grant Awards

- < \$50K per year, 2-year max; non-renewable
- No preliminary data are required
- Currently reviewed by a special NCI study section
- Good mechanism to jump-start an NIH-funded career
- Typical scope of an R03:
  - Pilot or feasibility studies
  - Secondary analysis of existing data
  - Small, self-contained research projects
  - Development of research methodology or new technology

# R21s: Exploratory or Development grants

- Up to \$275K/year for 2 years (<\$200k in one year); nonrenewable
- No preliminary data are required
- Submitted in response to specific Program Announcements; reviewed by various NIH study sections
- Typical scope of an R21:
  - Exploratory, novel studies that break new ground or extend previous discoveries toward new directions
  - “High-risk, high-reward” studies?

# R13 Conference grants

- Support for conferences/scientific meetings for up to 5 years
- Requires advance permission from the funding IC (6 weeks before receipt date)
- Award amounts vary and limits are set by individual ICs, indirect costs are not allowed
  - A detailed categorical budget request is key

# R15 AREA grants

- Small-scale research projects at educational institutions that have not been major recipients of NIH support (<\$6 million)
- Project period limited to 3 years, w/ direct cost limited to \$300K over entire project period
- Primary goals are to expose students to research & strengthen the institution's research environment

# R01 Research Project Grants

- Traditional investigator-initiated grant providing support for discrete, specified research
  - If > \$500K/year, need to request NIH approval to submit
  - Up to 5 years (usually 3–5 years)
- Requires sufficient preliminary data
- Demonstrate significance to a cancer outcome(s)
- Teamwork: Get collaborators and consultants and have strong letters

# Page limit summary

<b>Section of application</b>	<b>Grant award</b>	<b>Page limits (if different from FOA)</b>
Introduction to resubmission or revision applications	All grants	1
Specific Aims	All grants	1
Research Strategy	R03, R21	6
	R01	12
Biographical Sketch	All grants	4



Myth?

R03/R21s are for high risk/  
high reward studies

# Amy's Stereotypes of R's

- R03 – secondary data analysis, product development, test proof of principle (“high risk”) or exploratory hypotheses
  - Modest effort or resources needed
- R21 – pilot intervention, experiment, unique observation study, measurement development
  - Reviewers are not often supportive of exploratory aims
- R01 – intervention trial, large experiment, large observation study

# Myths about choosing a mechanism

(Don't prioritize the mechanism over the science)

- Myth: *I'm junior so I need to start with an R03/R21*
- Myth: *My Chair only wants me to write R01s*
- Myth: *I can only demonstrate that I'm an independent investigator if I have an R01*
- Myth: *I'm proposing secondary data analyses so I have to apply for an R03*
- Exception – think BIG and work backwards

# Let the science dictate the mechanism

- Focus on your idea and where the results will lead
- Timing
  - You can propose a 1-year R03/R21 if that's sufficient
  - You can propose 3-year R01 if that's sufficient
- Resources/Cost
  - Teamwork and collaborators (Co-Is vs. Co-PIs, consultants, mentors), equipment, novel technologies
- Avoid being overly ambitious/don't over-promise
  - Everything will take longer than you think!
  - Need to map out all methods in excruciating detail
  - State explicitly how & why you developed the scope

Myth: I don't have  
“preliminary studies”  
so I can't write an R01

# Define Preliminary Studies Broadly

- **Anything to gain the confidence of reviewers that you are uniquely positioned to accomplish what you propose to do**
  - Your related experience for various elements of proposal
  - Your collaborators' experience (so pick them strategically)
  - Your productivity and collaboration with co-investigators
    - Think of ways to work with new collaborators before submitting grants together
  - Conduct feasibility studies with institutional funds
  - Conduct related secondary data analyses
    - Definitely get info about target study population & prior recruitment success

# How to include preliminary studies info in R03/R21s

- You still want reviewers to feel confident in your abilities
- Don't confuse "not required" with "not desired"
  - Highlight your contributions to the topic (pubs, abstracts)
  - Provide details of N's available for secondary data analyses
  - Pre-test (feasibility, acceptability, validity) intervention manipulation, materials, survey measures, etc.
  - Present previous success in recruitment of target study population
  - Present literature review and content domains to support proposal to develop a new measure of a latent construct

# Know when to move forward/backward

- If you have done a couple pilot intervention studies (R21) – don't propose another, move on to the larger trial (R01)
- If you have conditional aims or development work that is needed first, consider best package (for same science/gift)
  - R21 then R01
  - R01 with development in Y1
  - Non NIH funded preliminary work to better position you for NIH R01
- There are many funded intervention studies using R21s and descriptive studies using R01s
- Keep different pots on the stove at any one time...



Discussion time