Writing NIH R03 and R15 Proposals: Advice from Funded PIs

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Focus on: NIH R03

USM Office or Research Integrity Research Forums/Workshops
Fall 2014 Series
R03-Small Grant: Description

- Research that can be carried out:
  - in a **short** period of time
  - with **limited** resources
- Great for early career researchers
- Obtaining a R03 maintains your status as a “**new investigator**”
  - Grouped in the early career/small grant award category for NIH
    - If more than one PD/PI:
      - All must meet this criterion to be considered a new investigator project
  - Some of the institutes restrict application of the R03 to new investigators only
R03-Small Grant: Description

Types of projects that work:
- Pilot/feasibility studies
- Methodology development studies
- Research technology development studies
- Small self-contained research grants
- Secondary data analysis of an existing data set
  - This is where I have been successful twice!

Non-renewable

Proposed period does not exceed 2 years
- Direct costs capped at $50,000/year
- Direct costs cannot exceed $100,000 total
- Can get no-cost extensions for 1 year (repeatable)

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I requested and received this for both R03s

my awards
Advice on Applying for a R03

- Always read the most recent funding announcement
- Check due dates and other important dates
  - Are they standard or are they exceptions?

- Are multiple PIs allowed?
  - If so, you must write a Multiple PI/PD Leadership Plan
    - Considered more “unusual” for small research grants, like the RO3
    - But CAN be JUSTIFIED!

I had two PIs on my first R03 and three PIs on my second R03; in each case, having more than one was JUSTIFIED!
Advice on Applying for a R03

- Unsuccessful applications can be resubmitted **ONE** time only

- Review panel evaluation will focus on the:
  - Conceptual framework
  - General approach

- Successful applications tend to involve projects that:
  - Are discrete
  - Are well-defined
  - Can be realistically accomplished in one to two years
  - Can be realistically accomplished with limited funding
R03 Components and Examples

- Title – be aware of the character limits
  - Titles of my funded R03s:
    - The Latent Structure of Attention-Deficit/Hyperactivity Disorder
    - Applying Generalizability Theory to the Measurement of Externalizing Disorders

- Project Summary/Abstract
  - Suitable to disseminate to the general public
    - But can still be relatively technical
  - Brief overview and significance
    - Example significance statement from Summary: The rationale for the study is that partitioning the error variance due to items, rater type, and grade will (a) determine which externalizing disorders (ADHD or ODD) are most reliably assessed by which informants, at which times, and thus (b) contribute to the further development of evidence based assessment.
Project Narrative

Lay audience language

Describe the relevance to public health

Example Project Narrative: Childhood externalizing disorders are linked to negative consequences and thus accurate assessment and diagnosis is critical. One of the major challenges of such an assessment is resolving how to interpret discrepant scores from different sources. The proposed study will help determine the best way to integrate assessment data from multiple sources for use in the diagnosis of externalizing disorders, which will contribute to the further development of evidence-based assessment.
Biographical Sketch

- Limited to 4 pages each
- Includes a **personal statement** (few sentences to a paragraph)
  - I briefly reviewed the goal of the proposed research and how my experience made me well-qualified to serve as a PI
  - For my second R03, I highlighted that my colleague and I received a previous R03 grant to use the same data set
  - I discussed how I had worked at UAB Medical Center, where we were getting our clinical sample and was familiar with those data
  - I discussed other related federal grants (also focused on externalizing behaviors) that I had received
  - Ended with: “I believe that my expertise in both child externalizing disorders and assessment make me particularly well-suited to serve as PI for this project.”

Be aware of maximums/limits/timeframes...details!

Sell yourself!!!!
R03 Components

- **Specific Aims**
  - 1 page
  - Concise overview of goals
  - Expected outcomes, including impact
  - Succinct list of objectives
  - **PROBABLY MOST IMPORTANT SINGLE PAGE—IT'S KEY!**
    - Needs to “pack a punch!” Be sure to list the very SPECIFIC AIMS!

- **Research Strategy**
  - 6 pages max; sections include:
    - Significance
    - Innovation
    - Approach
  - Can be very tightly formatted
R03 Components: Research Strategy - Significance

- What is the importance of the problem addressed?
- What barrier is overcome by completing the project?
- Does the project improve scientific knowledge, technical capability, and/or clinical practice?
- Does the project address one or more broad fields?
- How will the field be changed by the project?
  - Focus on the health implications
How does the project challenge and seek to shift current research or clinical practice?

What is novel about the project?

What does the project offer that is an advantage over existing methodologies, measurement, or interventions?

Are there any refinements, improvements, or new applications that would result from completion of the project?
R03 Components:
Research Strategy-Approach

- Do you have preliminary/pilot studies or a progress report?
  - If so, it goes here—but this is uncommon and unnecessary for the R03
  - R03 findings often serve this purpose for later R01s

- How will you meet the specific aims?
  - Strategy
  - Methodology
  - Analyses
  - Resource sharing plans
  - Timetable

- What are the potential problems and what alternative strategies can be used to achieve the specific aims?
  - Address feasibility
  - Address management of high-risk aspects

- What are the benchmarks for success?
R03 Other Components

- Cover letter (more like a “list”)
  - If needed, ask for a specific institute
  - Ask for a specific review committee

- Facilities and other resources
  - How does the scientific environment contribute to the probability of success?
  - What is the institutional investment in the success of the investigator?

- Bibliography/References Cited
- Inclusion Enrollment Report
- Human Subjects, vertebrate animals, select agents

My grant was for NICHD
My request was for the CHHD-H: Biobehavioral and Behavioral Sciences Subcommittee

Sell USM and its support of you
Multiple PD/PI Leadership Plan (if applicable); for example:
- Dr. Barry: expertise in child externalizing behaviors and previously used data set;
- Dr. Marcus: expertise in social relations model (similar variance partitioning technique) and previously used data set;
- Dr. Arnau: expertise in psychometrics (including generalizability theory)

Consortium/Contractual Arrangements (if applicable)
- Only if direct costs are going to another institution
- Having consultants at another institution does not make the application for a consortium

Letters of Support (if applicable)
- Get from others upon which you are relying to achieve the project

Resource Sharing Plan(s)

Appendix
- ONLY pre-printed questionnaires or surveys
- No publications and no figures
Seek Feedback About:

- General idea
- Funding source
- Innovativeness, novelty
- Clarity of specific aims
- Research strategy
- Methodology
- Analytical approach
- Proposal itself (writing)
Conclusions

- Be clear! Be concise! Every word counts!
- Highlight larger-picture importance (not just your particular research interest)!

- Make sure you are hitting the target:
  - Sell your idea!
  - Sell yourself!
  - Sell your scientific environment (i.e., USM)!

- If reviewed but unfunded, try again!
Please feel free to contact me with further questions. My contact information is as follows:

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