Research Funding: Grantspersonship from Graduate School through Early Career
(or how to get a job as a scientist)

J Quyen Wickham
Strategic Research Coordinator
OU Center for Research Program
Development & Enrichment
Thinking about your research career:

• What do you need money for?
• Where will the money come from?

Btw, I’ll share the slides after the talk
RESEARCH REQUIRES $$

Research
• Space
• Equipment/Supplies/Travel
• People
  • You
  • Grad students
  • Postdocs
  • Technicians

Startup $
• Space
• Equipment/Supplies/Travel
• People?
  • You
  • Grad student

Grants $$
• Equipment/Supplies/Travel
• People
  • You
  • Grad students
  • Postdocs
  • Technicians
Why call it “Startup”? 
“I’m screwed.”

Grantspersonship = Career Success

- Ability to get grants = **better** job prospects
- Ability to get grants **requires** writing winning proposals
winning proposals...

1. Plan
2. Collect **preliminary data**
3. Find opportunities that **fit**
4. **Read** proposals
5. **Write** proposals
6. Submit proposals
7. **Write more proposals**
Strategic Planning

• Follow federal/national research trends – find connections to your own research interests
  – https://www.nih.gov/research-training/medical-research-initiatives

• Start small and build on past experiences
• Remember: funding takes time... submission to research funding can take 6-16 months!
Strategic Planning: example

Include funding possibilities in your research planning and design

5-year Funding Plan

Stream of Research: Ecological influences on ...
Goal: Develop and test a multicomponent, theory-based ....

- **Internal Funding Sources**
  - JFF Summer 2018
  - FIP Summer 2019
  - JFF Summer 2020

- **Scientist Development Grant**
  - Spring 2020
    - (Submit at the end of 3rd year)
    - Must be submitted 4 years into appt.

- **NIH R03/R01**
  - Submit application before tenure review 2022-2023
  - Summer 2022

- **Instrument Development & Testing**
  - 2017: Intervention Feasibility (JFF)

- **Pilot Testing/Modification (FIP)**
  - 2018: Qualitative Research (JFF)

- **Instrument Development Study**
  - 2019
  - 2020

- **Apply for NIH R01**
  - 2021
  - 2022
  - 2023

- **Develop & Test Intervention (SDG)**
Collect Preliminary data: research data

- **Pre/Postdoctoral Data**
  - Provides *proof of concept*
  - Provides *evidence of your capabilities*

- **Work carefully through scientific questions and hypothesis development**
  - Describe the *gap in knowledge* based on lit review

- **For a research proposal:**
  - Focus on most *pertinent previous research* – don’t just cite everything!
  - Hypothesis development is a story: *how does the scientific premise lead to your hypothesis?*
Collect Preliminary data: non-conventional “data”

• What makes you uniquely capable of completing your goal(s)?
  – Make it a story

• Who do you have in your network to seek advice/support/team membership?
  – Collaborators
  – Mentors/Sponsors
Find Opportunities that fit: need/description

Step 1: Ask yourself: **What do I need?**

- **Why** do I need it?
- **Who** will benefit?
- **What** is already available to me?
Find Opportunities that fit: eligibility

Step 2: Who is your tribe?

• Research Area
  – Basic research: National Science Foundation (NSF)
    • Directories: http://www.nsf.gov/about/research_areas.jsp
  – Health Research: National Institutes of Health (NIH)
    • Institutes: https://www.nih.gov/institutes-nih/list-nih-institutes-centers-offices
    • https://projectreporter.nih.gov/reporter.cfm

• Other
  – Professional Societies/Organizations
    • Fellowships & Travel Grants
  – Underrepresented groups
Find opportunities that fit: searching

Step 3: Look for funding opportunities
1. Dissertation Awards
2. Postdoctoral Fellowships
3. Independence/Career Awards

- Federal Agencies:
  - NIH Fellowships: https://researchtraining.nih.gov/programs/fellowships
  - NIH Early Career: https://researchtraining.nih.gov/career/early-career

- Other (Google search)
  - Scripps List for Postdocs:
    http://education.scripps.edu/postdoctoral/funding_your_research/fellowship_opportunities.html

- http://www.grantforward.com
Find opportunities that fit: read carefully

Step 4: Reading the Funding Opportunity or Program Announcement

1. First, pay attention to:
   – Eligibility
   – Description

2. If you are a fit, then pay attention to:
   – Due Date(s)
   – Review Criteria
   – Program Officer / Scientific Program Contact

• Examples
  – https://researchtraining.nih.gov/programs/fellowships/F31
Read Proposals

• Ask/beg your advisor (preferably get awarded proposals)!
• Find similar/local awardees and ask if they’ll share
  – https://projectreporter.nih.gov/reporter.cfm
• Google search
• Your friendly* Research Development Office
Read Proposals

What are some things that might differentiate a proposal from a research article?
When reading proposals, look for:

- How do they **introduce** the proposal?
- How is the proposal **formatted**?
- Can you **understand** the science?
- Does the research **strategy make sense**?
Contrasting Perspectives

Scholarly Writing

- Focuses on researcher’s agenda
- Explains existing work
- Empirical and objective
- Few length constraints
- Uses specialized terminology or “jargon”

Grant Writing

- Focuses on sponsor’s priorities
- Describes work you want to do
- Persuasive and compelling
- Strict length constraints
- Uses accessible language and is written for a broad audience
Write proposals:
due dates & proposal timing

- Prepare early... ideally a year ahead.
- Watch for cycles and plan accordingly.
- Proposals require multiple documents and signatures.
Writing proposals: remember your audience

- Agency
  - Program Officer
- Reviewers
  - Primary Reviewers
  - Secondary Reviewers
  - Non-scientific Reviewers...
Writing proposals: the proposal writing pyramid

- Grandmother, Ph.D.
- Advisor*

*don’t assume the primary reviewer knows the acronyms & jargon
Writing proposals: drafts & support

- Use your peers (you have to learn to ask for peer review)
- Use your advisor/supervisor (you have to learn to talk to mentors)
Write proposals: summary/specific aims page

- Check that your proposal fits what the agency is looking for

Email it to the Program Officer/Scientific Contact

- Send your summary/Specific Aims page
- Ask if the proposal is relevant to their program goals
- Ask if you can call them with further questions
Write proposals: writing tips

Your goal: make your proposal one that a reviewer wants to read. There are a lot of good proposals; you want yours to stand apart.

• Each section should have a introductory paragraph that hooks the reviewer. It should be interesting and compelling. Leave the details for later paragraphs.
• Each paragraph should have a stand-alone topic sentence. The gist of the proposal should be revealed by stripping all but the first sentence of each paragraph.
• Be brief and clear. Lead your reviewer through the proposal.

Writing
• Use clear, simple declarative sentences. Avoid commas and semicolons.
• Avoid the use of clichés and empty generalities: be objective.
• Avoid weak qualifying words (if, try, hope, might, could/should, may, or whether). Use “expect” instead.
• Watch for similarly spelled words with different meanings (affect vs effect).

Office of the Vice President for Research
Norman Campus and Norman Campus Programs at OU-Tulsa
Submission: where to?

Two scenarios (usually depends on the size of the award):

1. You submit to OU’s Office of Research Services (ORS/ORA) and ORS/ORA submits for you
2. You submit directly to the agency (NSF GRFP, many foundations)

Look in the proposal guidelines. Regardless, check with ORS/ORA.
Submission:
review process

- Proposal
- Agency
- Review Team
- Program Officer
- Decision
- Division/Institute plus Program Officer
Extra #1: Making yourself known

- Scholar publications / Conference Presentations
- Web presence: You might be Googled!
  - Facebook.com
  - Social Networks: LinkedIn.com, Academia.edu & ResearchGate.net
Extra #2: ORCID.org

Put your OrCID at the top of your CV/Biosketch
Extra #3: Team Science

Team Science Toolkit

- [https://www.teamsciencetoolkit.cancer.gov/Public/Home.aspx](https://www.teamsciencetoolkit.cancer.gov/Public/Home.aspx)

Put your OrcID at the top of your CV/Biosketch.
The end...Questions?

...feel free to email me if you have further questions:

Quyen Wickham
qwickham@ou.edu

http://crpde.ou.edu/