

# NIH Grant-Writing Workshop

## Dlab Workshop

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## Workshop Outline

- Choosing the appropriate grant, contacting the Program Officer, and introduction to the official NIH application packet, known as the SF 424 (R&R), developing the Specific Aims
- Writing the Research Strategy, Bibliography
- Budgets and key personnel, the Biosketch, Letters of cooperation
- Human Subjects and Responsible Conduct of Research
- Other Documents:
  - Project Abstract/Summary
  - Project Narrative
  - Resource sharing
  - Facilities and Resources

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## Introduction to Grants

- NIH Grant applications are complex because they receive many thousands of them and need to be able to easily compare and evaluate them.
- But all grant proposals have the same components:
  - What I want to do
  - Why it's important
  - How I will do it and why
  - How long it will take
  - How much it will cost
  - Why I am (and my collaborators) are qualified
  - Why I'm in the right place (resources) to do it.

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## Getting Started

- Identify your research project
- Find a funding source.
- Contact the program official.
- These things take time.***
- Get an example to model yours on.
- Get reviewers.
- Get institutional support.

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## The Overall Process

- Ponder your idea as a result of your research and what would be cool to study more
- You will need no less than 2 months to develop a grant (I've never seen a hastily put together grant be successful), but really you should think about 6-12 months
  - Keep in mind the turnaround for decisions is another 4 months till you get reviewed, and if a good score, then 2 more months till you get funding approved, and then another 2-6 months till you see money (although there may be pre-award costs allowed)
- Search for funders (for NIH, do a grants search, sign up for announcements, and for unsolicited)
- Read the FOA (funding opportunity announcement) *REALLY CAREFULLY SEVERAL TIMES IN THE PROCESS*
- Prepare a draft Specific Aims
- Contact the program officer(s) to see if it makes sense.
- Develop draft budget with collaborators identified, and need for any subawards
- Work with Shared Services, the earlier in the process the better.
- Incorporate feedback in grant design
- Write strategy draft. Get internal reviews. Rewrite. Get another review. Edit.
- Write other documents
- Get draft docs to Shared Services 2-7 days before SPO's deadline 5
- Shared Services delivers to SPO 5 business days before due date to NIH

## Which One?

- Where are you at in your career?
  - Graduate Student – beginning or advanced
  - Postdoc?
  - Assistant professor
  - Tenured professor or other senior researcher
- How big or complex is the research project?
- Which NIH Institute or Center (IC) supports your area of research?
- Which program official within that IC manages research most closely aligned with your interests?

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## NIH Grant Background

- Several kinds of grant programs
- Each has 'parent awards' as well as 'set asides' and 'special interest' RFPs.
- Research: R01 (5 years, \$500k/annual); R21 (2 yrs, \$275k <\$200k in any year); R03 (2 years, \$100k; <\$50k in any year).
- Career: K01, K99. For developing a research career. Requires commitment of full-time employment from an institution. Sometimes used for new assistant professors.
- Fellowship: F31 (dissertation) and F32 (postdoctoral). Pays according to NIH salary and stipends amounts.
  
- Center development and programs: R24, P30, P01. For collaborative research programs.
- Training: T32, usually for graduate students, not individual applicant.

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## NIH Pre- and Post-doctoral Fellowships – F31 & F32

- Both are very similar in content and emphasis. The main difference is that the pre-doctoral is the proposal for your dissertation and assumes a less knowledgeable starting place.
- These grants are primarily a mentored research and **training** project in which your research is the case study for your acquisition of new skills and path for career development.
- These are made much easier by using someone else's successful grant application as your model.

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## NIH Pre- and Post-doctoral Fellowships – F31, F32 and F33

- ❑ F33 are for senior fellows, so I will concentrate on F31's and F32's.
- ❑ There are several "FOA's" that is, Funding Opportunity Announcements. Go to <http://grants.nih.gov> to search.
- ❑ Post-doctoral: Up to 3 years. Can submit while finishing dissertation. \$40k-\$50k per year stipend. <http://grants.nih.gov/grants/guide/pa-files/PA-11-113.html>
- ❑ Pre-doctoral: <http://grants.nih.gov/grants/guide/pa-files/PA-11-111.html> (Parent) & <http://grants.nih.gov/grants/guide/pa-files/PA-11-112.html> (for underrepresented scholars). Typically 2-3 years. Stipend is \$22k, 60% or \$16k of tuition/fees. Can be in addition to T32 funding.
- ❑ Both F31 and F32's can be submitted as an administrative supplement to an existing R01. If there is a professor who you would like to work with, check NIH Reporter to see if s/he holds a grant: <http://projectreport.nih.gov/reporter.cfm>. For example, there are 287 R01 grants with Cal faculty including Barbara Abrams, Brenda Eskenazi, Michael Jerrett, Barbara Laraia, Bob Levenson, Ted Miguel, Lonnie Snow and John Wilmoth.

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## Examples of ICs

- ❑ NICHD
  - Extramural Research areas:  
<http://www.nichd.nih.gov/about/org/der/branches/Pages/index.aspx>
  - Population Dynamics Branch:  
<http://www.nichd.nih.gov/about/org/der/branches/pdb/Pages/overview.aspx>
  - Life Course Health and Biopsychosocial Research:  
<http://www.nichd.nih.gov/about/org/der/branches/pdb/programs/pages/life-course-health.aspx>  
Note that the Program Official is Rosalind King.
- ❑ NIA: [nia.nih.gov](http://nia.nih.gov)...
- ❑ NIMH...
- ❑ NIDA...

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## Writing to the Program Officer

- ❑ Identify the officer either through the FOA's scientific contact person specified, or from looking at the IC's (institute or center) website.
- ❑ For example, <http://www.nichd.nih.gov/about/org/der/branches/pdb/programs/Pages/overview.aspx>
- ❑ You may cc more than one officer if you think it has multiple audiences. The goal is to see if they think it's worthwhile for them, to get feedback, or redirection to a more appropriate agency.
- ❑ Send the Specific Aims document.
- ❑ If not in the Aims, include:
  - Research question/topic
  - Hypotheses
  - Data and method
  - Budget and time frame
  - FOA number and name
  - Why you think the topic is relevant to the IC
  - Collaborators

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## The NIH Application Form: SF424(R&R)

- ❑ There is a link to the Application from the FOA (funding opportunity announcement).
- ❑ Let's learn how to read these FOA's first, before we look at the application itself. [Hint: Print to .pdf and then print out.].
  - Parent F32:  
<http://grants.nih.gov/grants/guide/pa-files/PA-14-149.html>
  - Parent R01:  
<http://grants.nih.gov/grants/guide/pa-files/PA-13-302.html>
- ❑ Once you know (or think) which grant mechanism is appropriate, which might be a parent announcement, or a specific request for applications (RFA) or Program announcement reviewed in the IC (PAR), then you will download the application. Acronyms making your head spin? Keep the Glossary handy: <http://grants.nih.gov/grants/glossary.htm>.
- ❑ The application for an NIH grant is not for sissies and that's why you're taking this workshop.

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## Documents Required for Most NIH Applications

- Biosketches of all key personnel
- Letters of support
- A budget
  - Budget justification
  - Sub-award, justification, institution letter
- Specific Aims
- Strategy (the proposal itself)
- References/Bibliography
- Appendices (e.g., survey instrument)
- Project Summary/Abstract
- Project Narrative
- Human Subjects
  - Women & Minorities
  - Inclusion of Children
  - Equipment, vertebrate animals
- Targeted Planned Enrollment
- Facilities and Resources
- Resource Sharing
- Cover Letter

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## Specific Aims

- One of the most important documents you write.
- One page only.
- Must introduce research question, justify it, state what the proposed research project will do, define specific outcomes (aims) of study, and specify its innovation and contribution to the IC's mission.
- Use this document:
  - To send to program official for feedback on research idea.
  - As an outline for your research strategy (the actual proposal).

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## Budget Planning

- Campus grants analysts will finalize budgets but they need to have these components delineated by the PI:
  - Salaries & benefits for everyone involved
  - Fee remissions for GSRs
  - Travel to do field work, attend conferences, fly in collaborators, etc.
  - Data collection costs, including incentives
  - Purchase of data, software licenses, hardware, supplies, postage, printing
  - Budget justification statement

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## Homework

- Identify the award type (e.g., F32), funding announcement (e.g., PA-14-032). Study this announcement carefully.
- Which institutes or centers (IC) are the most interested in your work? Who is the program official? What other work has this person shepherded?
- Write a draft of the Specific Aims.
- Create a rough list of any one else you might want in the grant with you (e.g., mentors for F grants, co-investigators or consultants for R grants).
- Create an even rougher idea of the budget. Don't worry about dollars, just items (salary, data collection costs, travel...)

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## Resources

- The Berkeley Population Center website:  
<http://www.popcenter.berkeley.edu/grants>
  - Including [http://www.popcenter.berkeley.edu/grants/nih\\_grants.shtml](http://www.popcenter.berkeley.edu/grants/nih_grants.shtml)
  - and [http://www.popcenter.berkeley.edu/grants/other\\_grants.shtml](http://www.popcenter.berkeley.edu/grants/other_grants.shtml) .
- CEDA: [www.ceda.berkeley.edu](http://www.ceda.berkeley.edu)
- <http://foundationcenter.org/pnd/> to sign up for their emails of RFPs.
- [www.eval.org](http://www.eval.org) for jobs, grants, more.
- Treasure trove of NIH and other grant information
  - <http://writedit.wordpress.com/nih-paylines-resources/>
- NIH: <http://grants.nih.gov>
- Erica Whitney's PowerPoints on NIH and NSF grants:  
<http://qb3.berkeley.edu/qb3/careerworkshops.cfm>

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## Biographical Sketch (Biosketch)

- ❑ A biosketch is NOT your CV. You should have a master CV from which you pull specialized versions.
- ❑ A brief statement of your accomplishments and capabilities relevant to the proposed project.
  - Personal statement about why you are qualified for this research and how it makes sense for your career. Can be quite long actually, but be concise. It is very important.
  - All relevant academic positions and accomplishments – reviewers, organized sessions, awards, fellowships, prizes.
  - Publications. Technically peer-reviewed but at your level put in working papers, review articles, book chapters, reports.
  - Any grants current or completed (last 3 years). Summer fellowships or 2 week programs are grants.

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