Seminar on Grant Writing

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Why are grant applications important?

- Success in research is measured by the number and quality of publications
- However, grants are necessary to get an academic position and fund the research that produces those publications
- In order to get a grant funded, a well planned and edited grant application is key

Types of Grants

- There are many foundation grants. A detailed guide on these are available in the HMS Red Book
  - http://www.hms.harvard.edu/FoundationFunds
  - http://www.hms.harvard.edu/spa
- Partners/MGH/Harvard institutional grants (eg. Harvard Catalyst Pilot Funding)
- NIH Grants
  - These are the trickiest but also the most broadly applicable

NIH Grants

- Within the NIH there are 27 institutes and centers: http://www.nih.gov/icd/. Funding for a particular grant comes from one of these centers
- The NIH classifies grants by activity code. A list of these is available at http://grants.nih.gov/grants/funding/ac_search_results.htm and http://grants.nih.gov/grants/funding/funding_program.htm Each activity code comes with different requirements and restrictions.
- You can see currently funded grants through the NIH Reporter: http://projectreporter.nih.gov/reporter.cfm

Big Changes at NIH

- http://enhancing-peer-review.nih.gov/
- Shortened applications
- Faster turnaround time
- Completely changed scoring

Summary of Select Activity Codes

- F32: NIH Training Grant
  - Pays only post-doc salary (does not cover research costs)
  - These are judged based on the merit of the post-doc applying and the quality of the mentor's data
- T32: An award given to an institution to fund postdoctoral research. Post-docs would apply for these through their institution not through the NIH
- K awards support the transition to an independent investigator
  - Different K awards are for different types of people. Some are for MDs, others for PhDs. Some are for clinical research and others for basic science. Each type of K award has its own rules.
  - K awards judge the "man" (the potential of the person applying to be a good scientist), the "plan" (for research and education conducted during the grant period), and the "fan" (the mentor(s))
  - Most K awards require that you be a US citizen or hold a faculty-track position
  - K99: The only K award available to non-US citizen post-docs
- R21 vs R01: Depends on the project and the outlook of the review committee
  - R21: 2 years of funding, for smaller exploratory projects, require less money than R01s, require less preliminary data, must hold feasibility
  - R01: Major projects, must have a high chance of success

How to write a successful grant: Step 1: The Idea

- Competition for grants is extremely high. No sloppiness in grant preparation will be tolerated by the Review Committee.
  - A good grant addresses a previously unanswered scientific question or seeks to resolve controversies in the known body of knowledge
  - Make sure to come up with specific aims, as well as feasible methods and a reasonable hypothesis for each aim.
  - Proofread and edit
- Only write fundable grants
  - The climate of research changes fast
  - Discuss the project with mentors in order to see if it is fundable
  - Within the NIH as a whole and even within each NIH institute there are often several areas of research that receive priority. Your grant has a greater chance of receiving funding if it matches the goals of the funding agency
  - Make sure that there are no restrictions prohibiting your grant. For example, during the Bush administration, stem cell research could not be funded
- Grants are not contracts. Your research plan can be modified over time. Sometimes, a new discovery will invalidate your research methods, in which case you may have to come up with a new plan. As long as the hypothesis and methods are good, the NIH will likely allow modifications in your plan.

RFAs vs PAs vs Unsolicited Announcements

- An RFA (request for application) is a “sale on grants.” These are issues the NIH particularly wants to address. The score threshold needed to receive funding for RFAs may be lower for these applications
  - http://grants.nih.gov/grants/guide/search_results.htm?year=active&scope=rfa
- A PA (Program Announcement) identifies areas of increased priority and/or emphasis on particular funding mechanisms for a specific area of science
  - http://grants.nih.gov/grants/guide/search_results.htm?year=active&scope=pa
- A Parent Announcement encompasses applications that do not fit into either of the above categories
- http://grants.nih.gov/grants/guide/description.htm

Know the Rules

- Always read the rules
  - Once you have selected an award mechanism, read the RFA or PA thoroughly.
  - Each announcement contains mostly general information, but unique and important information is spread throughout the announcement
  - Each announcement includes eligibility information, important dates, how long the funding period is, and budget requirements
  - Here is a sample RFA announcement: http://grants.nih.gov/grants/guide/rfa-files/RFA-AG-10-010.html

NIH Institutes

- Each institute has different people on staff and different internal politics
  - It's a good idea to get to know the institute, its politics and its people. Get the people there to know you too.
- In your letter of intent/cover letter, you should direct your grant to 1-2 specific institutes for funding.
  - This benefits the both you and the NIH. The NIH staff does not need to figure out where to send your grant and you are more likely to have your grant sent to the right places
- Each institute has its own budget for funding grants

SROs and POs

- SRO = Scientific Review Officer: An SRO is the person who manages your grant application through the review process. http://cms.csr.nih.gov/PeerReviewMeetings/BestPractices/Role+of+the+SRA.htm
- PO = Program Officer: A PO manages funded grants. http://www.niaid.nih.gov/ncn/grants/charts/check_po.htm
- Before submitting a grant application, you can address questions to the POs and SROs.
  - Since the NIH wants to encourage grant application submissions, they will often tell you to submit an grant application for your idea. Questions about whether or not a project is fundable and worth submitting are best left to your mentors.
  - SROs and POs will likely be helpful in determining if a project is applicable for their funding agency. You should ask them questions like “Is my project applicable to your NIH institute?” and “What study section is the best for my grant application?”
  - You can contact several different POs and SROs within an institute and amongst several institutes while searching for advice. Some people will be more helpful than others. However, the staff at NIH is small and there are a limited number of people to speak with
  - It is the job of SROs and POs to help you. Feel free to contact them about most questions you may have.
  - Also, many SROs and POs are helpful and want you to succeed. You can develop a long lasting working relationship with these people. For this reason, it is best to be friendly and nice when speaking with the SROs and POs.
- When you have chosen a RFA or PA, check the funding announcement to get a list of contacts
- NIH institutes will often set up booths at many national meetings as well as hold grant-writing workshops

Review Process – Study Sections

- Once submitted to NIH, grants are assigned to a study section
- There are different types of study sections – standing, and special emphasis. Each study section has its own composition and domain of knowledge
- For certain topics, it may be advisable to request a particular study section if it possesses expertise that other sections do not have
- Rosters for the study sections are available online at http://era.nih.gov/roster/
- If a study section does not contain members possessing expertise pertinent to your grant application, you may request an additional reviewer (and submit recommendations for who to invite) by working with the SRO

Dates and Deadlines

- Check the grant announcement for specifics regarding dates and deadlines
- http://grants1.nih.gov/grants/funding/submissionschedule.htm
- Partners does an internal review of all NIH grants before submitting it to the NIH:
  http://phsresearchintranet.partners.org/PHS_ResearchMgmt/RM_Prepare_Proposal.asp#Deadline

Grant Applications and Forms

- Download the grant application directly from the NIH page with the funding announcement
- Partners also has a list of forms for use: http://phsresearchintranet.partners.org/PHS_ResearchMgmt/RM_Forms.asp
- Always download new forms for each grant submission as forms change fast

Letter of Intent/Cover Letter

- Some PAs and RFAs request a letter of intent while others do not
- Information to include in a formal letter of intent or cover letter:
  - Funding announcement you are replying to
  - Institutes you would like to send your application to
  - Review panels you think would be most appropriate for your project
- The NIH welcomes receiving suggestions regarding the institute and study panel to send your grant application to. It reduces the amount of time the staff has to spend deciding these things.
- Sending your grant to the right place can also increase your success in the review process.
- You may consider calling ahead to the SRO to let them know you are submitting a grant application

Budget Writing

- Check the rules of the grant announcement to find budget restrictions. This includes the budget limits and whether a modular budget is allowed
- Use the budget template available on the Partners Research Management website. It will automatically calculate some fields for you
- Request the appropriate amount of money to conduct your research properly and honestly. This includes a consideration of cohort size, outcome measures, and power.
- http://grants.nih.gov/grants/developing_budget.htm

Modular Budget vs Detailed Budget

- A modular budget does not have a line-item account of the budget. A detailed budget does.
  - Detailed budgets are time consuming to make
- To use a Modular budget, the grant must meet the following criteria
  - <$250,000/year direct costs
  - http://grants.nih.gov/grants/funding/modular/modular.htm
- Even if you apply for a modular budget, you should have already planned out how much money you will need
  - Having a budget planned out is essential to conduct honest research
  - A full budget is required for Just-In-Time (JIT) submissions, which are requested if your project received a good score at review and is likely to be funded.
  - Remember to inquire about Departmental fees and other fees (Martinos Center IT Support) and include this in your grant.
  - For some categories (ex office supplies) it is fine to put a rough estimate of the amount of money you need on the application

Salaries and Percent Effort

- Salary ranges are dependent on official title and years of experience
  - Discuss your salary with your mentor
  - Raises can be requested at the departmental level upon success with grant submissions
  - Special permission is required for raises >6%
  - Mary Clark (MMCLARK@PARTNERS.ORG / 617-724-3087) provides consultation on professional staff compensation at Partners
- Maximum Percent Effort allowed is 100% / 12 Calendar Months
  - In the “overlap” section of your Other Support page, it should explain how percent effort will be changed to maintain no more than 100%.
  - Each grant can only have your percent effort lowered by 25% or special approval is needed
  - Work with your grant administrator to adjust your support

Indirect Costs

- Remember to consider indirects in your budget
- Partners charges indirects on all grants
  - Indirects are used to fund many institutional resources
  - Each institution negotiates an indirect rate with the NIH

What can Partners do to help?

- You can contact the Partners grants team about any grants related questions and get training on grant submission
- Partners conducts an institutional review of all grant applications
  - About 15 days prior to the NIH deadline for the grant, it must be sent to your Partners grant administrator for proofreading
  - http://egrantsubmission.partners.org/
- Your mentors and peers are also a valuable resource

Review Process

- Check out the video of a mock review session:
  - http://cms.csr.nih.gov/AboutCSR/OverviewofPeerReviewProcess.htm
- SROs and POs sit in on the review process. They can help clarify some of the issues raised by the review panel

What if I don't get funded?

- Resubmissions
  - It is common for grants to require 1-2 resubmissions before getting funded
  - There are regulations on the number of times a grant can be resubmitted. This will be explained in the grant announcement

Useful Resources/Websites

- http://www.niaid.nih.gov/ncn/grants/cycle/default.htm
- http://www.niaid.nih.gov/ncn/newsletters/2009/1112.htm#n01
- http://www.niaid.nih.gov/ncn/grants/default.htm
- http://grants.nih.gov/grants/grant_basics.htm
- http://grants.nih.gov/grants/grants_process.htm
- http://era.nih.gov/ElectronicReceipt/
- http://grants.nih.gov/grants/peer_review_process.htm
- Your peers and mentors
- Online blogs