Postdoc Academic Chat #7

COMMON MYTHS ABOUT GRANTS AND GRANT WRITING AND HOW TO OVERCOME THEM

Thursday, April 13, 2017

Questions/Discussion Items to Consider

* What 2-3 specific things can you do now as a postdoc to get a head start on grant writing when you start as a faculty member?

* What kind of internal grants are available at Stanford in your area and who can you talk with who can share their experiences in this regard?

* Are their any other myths not listed in reading #3 that are unique to your research field or specialty?

Readings

#1. Winning, Managing, and Renewing Grants
#2. Finding Grants – Where to Start
#3. Common Myths About Grants and Grant Seeking

#1. Winning, Managing, and Renewing Grants

The article below from, The Scientist 14[21]:31,Oct. 30, 2000, by Karen Young Kreeger, has some important advice for grant seekers. Although it focuses on the biological sciences, much of what is said applies to most science and engineering disciplines. Copyright 2000, *The Scientist, Inc*. Reprinted with permission.

Before all else fails, read the instructions

They say it's a publish-or-perish world in science, but how can you stay alive if you don't have any support? With grant proposal return rates at all-time highs for many granting bodies, how can you make your proposals pass muster, let alone sing? "It's the very simple things that can cause an application to fail," says Jackie Roberts, manager of

career resources at the Federation of American Societies of Experimental Biology. "Read the instructions. Read the instructions. Read the instructions. Then finally, read the instructions," she jokingly cautions.

Common mistakes like too many pages, too small a font size, wrong forms, too long a title, not enough copies, as well as misspelled and incomprehensible text are some of the most basic reasons why proposals are returned, say grant-writing specialists.

"Follow the guidelines," agrees Don Frazier, a professor of medicine and biomedical engineering at the University of Kentucky in Lexington and a principal investigator on the University of Kentucky Interactive NIH Grant Writing Program, an Internet-based grant-writing program for faculty at minority-serving institutions. "The guidelines are written by reviewers," adds Frazier, who himself has been a grant reviewer for the National Institutes of Health.The acceptance rate for NIH grants is 20 percent to 40 percent, depending on the individual institute, notes Frazier. For those investigators with reasonably high scores to begin with and who address the reviewers' criticisms and then resubmit, he says, "their chances go up remarkably well," by 50 percent to 60 percent. "Bad news can lead to good news."

Locating Opportunities

All of this is well and good, but you need to find what's out there first. Thanks to the Web and E-mail, over the last few years a few free and subscription-based grants alert systems have cropped up for scientists and grant administrators (see Resources). One is ScienceWise, where scientists, engineers, and mathematicians receive E-mail alerts based on keywords regarding Requests for Proposals listed in the Federal Register, Commerce Business Daily, at NIH, at the National Science Foundation, and with private and corporate foundations, among others. ScienceWise also has another grants-alert feature that sends out notification about Small Business Innovation Research, or SBIR, grants given by 10 federal agencies.

"The Internet has changed the administration of grants tremendously," says John Rodman, president and CEO of ScienceWise. "It's changed finding grants, writing grants, everything but doing the science." Before starting ScienceWise, Rodman was director of research at Southern Illinois University and the University of Texas, Dallas.

Other one-stop grant shopping sites or grants-alert services include ones at the Community of Science and GrantsNet Web sites. "I would recommend using all of these sources," says Frazier. "The better you can research opportunities, the better chances you'll have. You'd be amazed at what's out there." Grant administrators also recommend that researchers check in with their respective offices of sponsored research. Oftentimes they employ a full- or part-time grants-information specialist who is in charge of staying on top of grant opportunities.

Frazier adds: "You should also be prepared to submit ideas to more than one place. This is only a conflict when something great happens."

Write to FIT

Help for grant writing abounds. Books and videos, as well as special sessions at professional meetings, on-campus brown-bag seminars, and summer classes on how to pen a winning proposal all provide great advice.1 One of those services is the University of Pittsburgh's Survival Skills and Ethics Program, codirected by Beth Fischer and Michael Zigmond, a professor of neuroscience at Pittsburgh. The program is a series of eight one-day workshops per year. One of those eight concentrates on grant writing. Fischer's main advice for researchers: Develop good writing skills and develop a proposal that "FITS":

- One that Fills an important gap in knowledge.

- One that is Interesting to you, your field, and the funding agency. For this, she advises, researchers need to tailor their ideas to the mission of the granting agency.

- One that Tests a hypothesis. "Descriptive, 'fishing-expedition' types of proposals are not viewed as highly as experimental, hypothesis-driven ones. "Reviewers want to see a testable hypothesis," says Fischer.

- One that has a Short-term, attainable goal, but that also meshes in with the granting agency's long-term goals. "Don't promise that you'll cure cancer in three years," notes Fischer. "Carve out a small part that contributes to that." She adds that reviewers do need evidence of the proposed experiments' feasibility within the suggested timeframe. "A common mistake of young investigators is that they promise the world." Fischer also lists other important pieces of advice. "One is called The Christmas Tree Effect--if one light goes out, they all do," she explains. If an investigator proposes one experiment that all the rest hinge on, then the grant needs to include a contingency plan if that keystone experiment fails.

What if the results turn out to be ambiguous or inconclusive? Fischer says that proposals also need to include a back-up plan of what to do next: "Show that you have thought of the possible outcomes and have a plan." And by all means, she says, "get a second, third, or fourth set of eyes to review the grant, but allow for the time to do that."

Stay in Contact

What Lynne Chronister, director of the office of sponsored projects at the University of Utah, Salt Lake City, does is reasonably typical across academia. Her office is responsible for helping faculty to locate funding opportunities, make contact with sponsors, navigate the proposal-writing process, especially with items such as the budget pages, negotiate terms after a grant is awarded, and establish an account for grants. The most important piece of advice Chronister has for grant writers is: "Make contact with the grant sponsor. When you skip to just putting in the proposal then the success rate is a bit lower." Grant administrators at foundations can tell you what's already been funded, the

direction of what the organization wants to fund in the case of private foundations, and emerging topics of interest.

Fischer agrees: "People assume it's cheating, in fact it's the opposite." Program officers want the best portfolio of grants for their organization. "They can give advice for targeting ideas and common pitfalls." Offices of sponsored research and grant administrators also are helpful in grant renewal and management. Regarding managing grants, grant-writing specialists say to make use of the granting agency or organization's website--check to see what you can and can't do with the money. When in doubt, again check with a grant administrator. Regarding renewing grants, the main focus is that you have to actually have demonstrated that you did what was originally proposed, says Roberts. "You need to show progress and evaluation. NIH is looking for accountability."

Try, try again seems to be the grant-writing mantra. "Take the advice that comes from reviewers' critiques," says Frazier. "Successful grant writing is a matter of perseverance and a thick skin."

#2. Finding Grants – Where to Start

The posting below offers some excellent advice for new professors on writing and obtaining research grants. It is by Karen M. Markin director of research development at the University of Rhode Island's research office. The posting first appeared in Chronicle of Higher Education career advice column, CATALYST on March 10. 2006. [http://chronicle.com/jobs/news/2006/03/2006031001c/careers.html]. Copyright ? 2006 by The Chronicle of Higher Education. Reprinted with permission

It's officially behind you -- that first frenzied semester of being an assistant professor. You have conquered the electronic grade-submission system and know where to get a decent cup of coffee. Now it's time to think about career development. In the academic world, that usually means finding grants.

Where to begin? It's surprising how many new assistant professors just don't know. Many feel under pressure to "know everything" and are afraid to ask what they fear will seem like obvious questions about the grant process. As an experienced grant writer, my goal here is to offer some basic advice about seeking a grant and spare you the embarrassment of having to ask.

First find out what services and resources are available at your institution. During the whirlwind of welcoming sessions for new faculty members, you may have been told about campus offices that assist with external grants. Your mind may have been focused then on setting up an e-mail account or getting that all-important parking sticker. Now is a good time to follow up on grant services.

There's No Place Like Home

Just about every college or university has an office, or at least a person, who oversees the institution's requests for external grants. The name of that office varies, and is often cryptic, but you should be able to track it down through your institution's Web site.

At major research universities, the Web site's home page usually has a link titled "research." Follow it. If you are then faced with a list of offices, start with one that says something like "sponsored-projects administration" or "sponsored programs." Some of the information you need may also be nested in a link to the office of the vice provost for research.

If you're at a medium-sized institution that doesn't post a "research" link on its homepage, try going to an alphabetical list of offices, and look there for sponsored projects, sponsored programs, or research administration. And if you're at a small college, start with the people on your campus who raise money from private sources. The office may be called advancement, development, corporate and foundation relations, or some variation of those.

Once you've found the correct office, tap into its services. Most have one or more databases of grant sources. At large research universities, such databases are probably available to you from your office computer. Some of their trade names are Community of Science; the Illinois Research Information Service known as IRIS; and the Sponsored Programs Information Service, or SPIN. You access those resources the same way that you would library databases for journal articles, selecting values for a fixed set of criteria. If you used online reference databases well enough to get through graduate school, you can use a grant database.

If your institution is small and does not subscribe to databases listing sources of grant money, ask for help from the campus fund-raising office. It may have a database of foundation grants that it can search for you. You can search for federal financing opportunities through Grants.gov. That service bills itself as "the single access point for over 1,000 grant programs offered by all federal grant-making agencies."

Remember when you're searching it that -- unlike the subscription databases, which are tailored to the academic community -- Grants.gov covers the breadth of federal funding. So, in addition to grants for scientific research, you will come across grants to states for emergency-preparedness training and similar programs that are not likely to interest you.

The Web site for your institution's sponsored-programs office may provide the answers to a lot of your questions about grant-writing fundamentals. Most will list the names of key contacts and their areas of responsibility. Some include a checklist of the steps to take in preparing a proposal at your institution. If your institution is small and doesn't offer extensive online help, don't hesitate to utilize the online resources of large research universities. Start with the flagship public university in your state. It can link you to online proposal-writing help, some of which is provided by the grant agencies themselves. That type of advice is typically categorized under "proposal development." The Web sites of major universities also have bibliographies of publications about

proposal writing.

Financial Aid

The next step is to track down the "starter grants" for new faculty members at your institution. Universities usually have seed money to help newcomers get their research under way. You might, for example, get money from your institution to collect pilot data in the summer so you can submit a grant proposal to a federal agency in the fall. Try asking the provost's office or your sponsored-programs office for information about the availability of starter grants.

You may also be able to scrape together money for a trip to Washington to meet with a program officer to discuss a proposal idea. Your dean's office, sponsored-programs office, or department head may have travel money for such trips.

Don't be afraid to ask, and don't be apologetic, even if an office doesn't have a formal program for making such grants. Many people are able to obtain money simply by asking. Some go so far as to act entitled to such resources, but there's a fine line between assertiveness and arrogance. The latter will not encourage people to go out of their way to help you.

Many foundations and agencies offer grants specifically for beginning professors. If you're searching a grant database, the criteria under "applicant type" probably include "new faculty member" as an option. At the federal level, new faculty members have a few grant possibilities:

- The National Institutes of Health has a series of career-development awards called "K Awards," including the Career Transition Award (code-named the K 22). The NIH also recently announced a program offering Pathway to Independence awards to help postdocs make the transition to independent research careers. The NIH Web site has a Career Award Wizard to help investigators choose among the agency's career-development awards.

- The National Science Foundation also has a program for new investigators, the Faculty Early Career Development program, known as Career.
- Some private foundations also have programs for new scientists. Examples include the Camille and Henry Dreyfus Foundation, which offers grants to new faculty members in the chemical sciences, and the Alfred P. Sloan Foundation, which supports new professors in a variety of scientific disciplines.

Breaking Away

It's time to start separating from your dissertation adviser and developing supportive relationships with people where you work.
An experienced chemistry professor I spoke with warned that new faculty members who get a degree from a top graduate program and take a job at a smaller institution will need

to learn how things operate at their new college. That is something your adviser at Big Bucks U., with her retinue of research assistants and reliable clerical support, cannot help you with.

Chat with faculty members in your department to figure out how to get things done. Don't hibernate in your office or your lab, dividing your time between class preparation and manuscript writing, thinking that dutiful diligence will lead to tenure. Having conversations with other professors to learn the ropes is just as important to your survival as teaching and research. Through those chats, you may also find people on campus with similar interests with whom you might collaborate on future projects.

It helps to have a mentor, whether you actually use that term or not, to help you decide which grants to seek and how to navigate the bureaucratic shoals that lurk in every administrative office. A successful senior colleague can tell you what the expectations are at your new institution and how to meet them.

For example, it's unrealistic to think you will generate a major program of research in your first year. Find out what is considered realistic, and allow others to help you achieve it.

Be aware that many federal agencies are dealing with flat budgets, so it really is more competitive today to get a grant than it was when your major professor and the full professors in your new department were starting out.

A good mentor also can steer you away from projects that aren't likely to be a good use of your time. For example, when you're an assistant professor, it's not wise to apply for a major equipment grant, unless it specifically focuses on new faculty members. Agencies finance requests for major equipment that will be used by many students and professors, possibly even those from other institutions. As a newcomer, you will have few contacts, making it difficult to convincingly argue that you have a critical mass of users.

Also, if you are untenured, grant agencies will be leery of paying for equipment whose champion may not be around in several years. If you need equipment, consider serving as a co-investigator on a multiuser instrumentation grant, leaving the leadership role to someone more experienced.

Similarly, new faculty members should steer away from serving as a principal investigator on major multi-investigator collaborations. Those projects thrive on long-standing relationships among researchers, and you haven't been in the business long enough to develop them. They also benefit from the authority and respect that an accomplished senior investigator can command. Establish a track record before taking on a multi-investigator project.

Don't be afraid to seek advice from your departmental colleagues. Remember, everyone wants you to succeed, from the secretary who schedules search-committee appointments to the faculty member who drove you to and from the airport. By helping you, they can

spare themselves the work of hiring another assistant professor.

Karen M. Markin is director of research development at the University of Rhode Island's research office.

#3. Common Myths About Grants and Grant Seeking

The excerpt below gives some good advice on what to do, and what to avoid doing, when applying for grants. It is from: DEMYSTIFYING GRANT SEEKING: What You Really Need To Do To Get Grants, by Larissa Golden Brown and Martin John Brown. Forward by Judith E. Nichols, PhD., CFRE. Published by Jossey-Bass, A Wiley Company 989 Market Street, San Francisco, CA 94103-1741. Copyright ? 2001 by John Wiley & Sons, Inc. Jossey-Bass is a registered trademark of John Wiley & Sons, Inc. Reprinted with permission.

This book gives you simple techniques you can use and habits you can develop to become an effective grant seeker. But before you try to apply them, you need to free yourself of some common misconceptions about grant seeking and get a more realistic idea of what you should and shouldn't expect from the process.

Myth; Grants are something for nothing.
Reality: Grants are rational deals between colleagues.

Grants are appealing because they look like big chunks of free money. Unlike most individual donations, grants are often large enough to actually buy something, that is, to fund a whole program for an entire year or to purchase a major piece of equipment. And, to get a grant you just send in an application. The funding party sends back a check, and you don't need to pay it back. A grant seems like manna from heaven or a winning lottery ticket.

This perspective feeds some unfortunate practices and beliefs. Buying a lottery ticket takes no skill, so nonprofits that see grant seeking as gambling apply on impulse, without preparation; they assign the wrong people to work on proposals, or they place no value on the work of a skilled grant seeker. The only way they can increase their chances of winning a lottery is to buy more tickets, so some organizations practice the "spray and pray" method of grant seeking sending out scores of identical proposals in hopes a few will "hit" and provide a windfall. Some non-profits go fishing for funds, returning to the same foundations over and over again, hoping to eventually get a bite. Worse, some nonprofit staffers become sycophants, flattering grant makers and hoping this will provide an edge or an "in."

These methods are recipes for resentment and waste labor. Rejections of desperate, heartfelt proposals naturally fuel the attitude that grant makers are fickle and unfair. Winning (or losing) a grant on the basis of flattery and connections rather than on the

merits of the proposal can't do much but create a malaise that few at idealistic nonprofits will be comfortable with. And sending out scores of ill-considered proposals wastes a lot of work, not to mention paper and postage, considering that none are likely to be funded.

Grants are not free money. Foundations and other grant makers are organizations like your nonprofit. The have mission and goals just as you do. Funding parties award grants because what the grant recipients plan to do with the money fits in with the funding party's own goals, initiatives, and dreams-and with their founder's stated wishes.

It makes sense to see a grant as a fair deal between colleagues whose interests are similar but whose resources are different. Your nonprofit and the funding party have similar goals. One example might be housing the homeless. The funding party has money to use for work toward that goal. Your nonprofit has the capability to do the work, with shelter space, expert staff, connections with health care providers, and so on. Your organization performs the work in exchange for the money. Your organization and its programs have a value that is equal to grant money.

If you can recognize this value, you will stop praying, fishing, and flattering for grants. You will begin to look for and see matches with funding parties whose interests and goals are most like yours. You will behave less like a supplicant or gambler and more like a partner with funding parties. You will handle rejection better, too, because you will be able to conceive that it is possible that some other organization had a proposal that fit the funding parties goals just as well as yours.

Acknowledging the full value of your own organization and its programs isn't always easy. Grant seekers and grant makers are bound up in a status relationship so deeply ingrained it is sometimes difficult to recognize. Grant seekers are accustomed to-even proud of-being poor, fighting for recognition and justice, and having to beg for money. They have a lower status than grant makers, who often play the part of exclusive or "noble" organizations.

This status difference seems to come from a belief that money (or the ability to give it away) is more respectable than expertise, ability, or action. It hasn't helped that some funding parties have been willing to take on a superior role, hiding behind unlisted phone numbers or gatekeepers and making forbidding statements like one we heard recently: "Dr. X prefers not to meet with anyone." At one workshop we attended, a program officer from a well-known national foundation seemed to admit his organization found ambiguity convenient when he said, "It is the policy of the foundation to not be comfortable with getting too clear."

The pecking order is perpetuated every day when nonprofits flatter and supplicate in their grant seeking. They are just as complicit as funding party's, coming to believe they are "owed something" for their good work. They attempt to play their low status to their advantage, appealing to those higher up with their incredible need and devotion, Someg rants consultants might advocate that you adopt this role. But no matter how we in the

nonprofit world martyr ourselves for the good of our causes, funding parties are free to make their own decisions.

Although it is unproductive to demand or expect to be funded just because foundations "have to give it away," it might empower you to remember that a funding party's money can do little good for the community unless it is invested, for example, in organizations like yours. Funding parties need nonprofits to spend their money effectively just as much as nonprofits need funding parties to pay for their programs.

It's also encouraging to remember, that although grant seeking seems surrounded by mystery, it is basically a rational process. Usually some or all of the criteria used toward a grant are presented in writing, and if you are not awarded a grant, you may be able to find out why. Often it is because your organization did not fit the written guidelines or the unwritten but discernable priorities of the foundation trustees.

That's not to say grant making is 100 percent fair. Even fair deals between colleagues involve some intangible elements like trust, and any process involving money is open to misunderstanding and corruption. Even at the fairest of trustee meetings, very good programs and proposals can end up as the least important ones on the table.

Still you have control over many elements of the process: which funding parties you apply to, how you relate to those fund parties, which information you present to them, how you present it, and how you organize your efforts. Efficient grant seekers raise more money in less time because they take charge of these parts of the process-the parts they can control-rather than leaving them to vagaries of flattery, hope, or luck.