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The Buck Starts Here

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Scientific expertise alone won't get you a research grant. You also need to be "street smart" about grants -- something you may not have learned in graduate school.

In addition to having a good idea for your research, you must find an agency that needs what you will discover if you pursue your idea. Then you must establish your ability to carry it out on budget and on schedule, so the agency will trust you with thousands of dollars.

Submitting a winning proposal to the right agency can involve trial and error. If you're up against the tenure clock, you will want to avoid as many missteps as possible. Here are a few tips for the first timer on how to maximize success in preparing a document that is as different from a dissertation as a car commercial is from the owner's manual.

I'll assume you are starting out with a good idea and a vague notion about possible grant agencies. Let's start with some do's:

Check out your target agency's recent awards. The first step is to narrow down your list of possible grant agencies to the most promising prospects. The best way to do that is to see what they have supported in the past. The Web sites of major agencies list the names of recent grant recipients and the titles of their projects. Some, like the National Institutes of Health and the National Science Foundation, have vast, searchable online databases containing that information for a decade or more.

Find a few proposal titles that seem relevant to your work, and consider the abstracts. Check out the investigators' names, ranks, and institutions. Do you seem to fit? If all the grant recipients are tenured professors at major research universities and you're a new faculty member at a two-year college with a heavy teaching load, you may not have the resources to propose a project of adequate scope for that agency. By examining the agency's recent awards, you can also make sure you're not proposing work that has already been financed.

Speak with a program officer. Although requests for proposals posted on agency Web sites describe grant-program requirements, talk to a program officer to ensure that your specific project fits the agency's needs. Your interpretation of what the agency wants, and the program officer's interpretation, can be quite different. You can save yourself time and frustration with this simple step.

Be sure to *speak* with a program officer. Don't rely on e-mail unless the officer communicates only through that medium; then you'll want to respect that preference.

Sometimes new faculty members feel intimidated and are reluctant to call program officers. Look at it this way: They're public servants, and it's their job to award those dollars. Once you have a program officer on the phone, try to have a frank discussion about whether your project fits the goals of the grant program you've identified. The officer may be more candid in a phone call than in an e-mail message that may exist in perpetuity, and you don't really want to waste time submitting to a program that is a bad fit.

It can take six months from the date of submission to find out whether your proposal will be supported. That's a substantial chunk of tenure-clock time. If your project isn't a good fit for the program, the officer frequently can refer you to one that is -- one that you may not have otherwise considered.

When preparing your proposal, follow the agency's guidelines. That sounds obvious but is frequently ignored -- even by people with doctorates who certainly have the necessary reading-comprehension skills.

If the program announcement says to limit your narrative to 15 pages, limit it to 15 pages. If it sets the minimum type size at 10 points, don't think you'll fool anyone by trying to bump it down to 9 points. Reviewers typically have to read many proposals in a short amount of time, and they're paid little or nothing to do so. The last thing you want to do is irritate them.

Don't count on reviewers being so excited by your brilliant science that they will overlook your flouting of the rules. More likely, they will be concerned about being fair to the applicants who did follow the rules. Increasingly, Web-based submission systems use technology to force applicants to stick to the page limit and other guidelines by not accepting anything that is too long or contains impermissible appendices. Find out beforehand whether that is the case at your target agency.

Be particular about the little things. It may seem unnecessary to remind university professors to pay attention to proper grammar, spelling, and punctuation. Yet sometimes they don't.

Remember, grant readers will know nothing about you except what is presented in the proposal package. Reviewers will think that if you're sloppy about details in the proposal, you may be sloppy with your science.

Have a colleague read the proposal before you send it off. A second pair of eyes can be very helpful at spotting sections that need improvement. Choose an educated person who is not necessarily an expert in your field. Have the reader focus on overall organization and clarity.

Sometimes proposers write a great deal about what has been done before in their field but fail to adequately discuss what exactly they will do with the grant money and how long their research will take. A person who is not as absorbed with the project as you are can readily spot that type of problem.

And now for a few don'ts:

Don't wait until the last minute to prepare and submit your application. Murphy's Law usually prevails at proposal submission time: Computers crash and copiers jam.

If you were a procrastinator in graduate school and think you can keep getting away with it, you are in for a rude surprise. Back then you were solely responsible for most of your work, a one-person show. As a faculty member, you will have to work with many other individuals at the university. You will need your dean and various staff members to approve aspects of your project, and those people have many other professors to serve. They may not be immediately available to process your proposal.

It will do you no good in the long run to bully those people into dropping everything to attend to your project. Plan ahead and try to engage them in positive cooperation. They can be very helpful to you in the future.

Don't assume that reviewers will be experts in your subspecialty. Even though you are writing for other scholars, avoid jargon. Your reviewers will be educated people with expertise in your discipline, broadly defined. But they won't necessarily be familiar with the latest developments in your particular niche.

Define your terms. Use acronyms sparingly, if at all. If you do use an acronym, be sure to explain it on first reference. Don't let your proposal become an unreadable swamp of alphabet soup. If reviewers have to work hard just to figure out what you're trying to do, your proposal is in trouble.

Don't give short shrift to the budget and its justification. That is the first part of the proposal that some reviewers read. An experienced reviewer can get a clear idea of what you plan to do from those components.

Although the budget may seem like a lot of tedious bean counting compared with the excitement of scientific discovery, it shows whether you are putting your money where your mouth is.

Reviewers will notice, for example, if you say in your proposal narrative that Professor Hypotenuse will evaluate your project over the summer, but you fail to allocate summer money for that work. They may think you're careless, or that you and Professor Hypotenuse are not giving high priority to the evaluation in your schedules, which raises doubts about whether it will get done.

The budget justification is where you explain in detail the expenses listed in your budget spreadsheets. Don't leave reviewers guessing about expenses that are out of the ordinary. For example, explain that your postage costs are high because you will be conducting a mail survey. Reviewers may not take the time to thumb through your proposal narrative to confirm that the costs are justified.

Don't give up if you're rejected. Most everyone who submits grant proposals has been turned down at some point.

The rejection may not even have much to do with the quality of your work. Perhaps the organization was flooded with applications to a meagerly financed program. In that case, many excellent proposals fail to win financing.

Think of the rejection as one part of the larger process of your grant-writing and research enterprise. It does not mean the end of the line for that proposal or for your career. It simply means you must revise and resubmit.

Don't forget to obtain copies of the reviewer's comments. To revise and resubmit, it is essential that you know why your proposal was turned down the first time. Sometimes reviewers' comments are not sent to you automatically and you need to request them. Do it.

If you need a cooling-off period before looking at the reviewer's negative comments, that's fine. Just don't avoid them completely.

Be as objective as you can when reading the comments. It is tempting to follow in the footsteps of some other faculty members and write the reviewers off as too stupid to understand your work. That may contain a grain of truth; they probably didn't understand it. But since they're the ones helping to decide whether you get the money, it is in your best interest to present your work so they can appreciate its significance. Try to have a colleague who is less emotionally invested in the project read the comments and assess their validity.

Determine from the comments what the major problems were. Are you focusing on the wrong agency or program? Does your methodology need improvement? Have you failed to show the significance of your work within the field?

Once you've determined what needs to be fixed, then fix it. The only time you can be sure you won't get the grant money is when you don't send in a proposal.

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