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by Liane Reif-lehrer

PROFESSION

Going For The Gold: Some Dos And Don'ts For Grant Seekers

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Sorry to say it, but if you are a scientist who has had a tough time obtaining federal funding to carry out your research, life is apt to become even more difficult in the next few years. In 1987, the National Institutes of Health (NIH) funded 6,446 competing grants. In 1990 the agency expects to fund only 4,719 grants. By cutting the number of grants it makes, NIH intends to boost the size of each grant. The move apparently stems from the agency's feeling that too many scientists have been working with too little funding, causing real changes in the research projects that were originally proposed, reviewed, and approved.

As a result, the competition for NIH grants is going to increase, and the quality of your proposal to that agency had better improve. Indeed, standards of excellence among other grant-making organizations are rising as well, so you should give serious thought as to how you can become a successful grant-getter in this more competitive market. There are several ways to go about improving your chances.

First, you need to understand the mission of the agency to which you are applying for money. If the agency is not interested in your project, no matter how innovative and well thought-out the work is, your application will not be funded. Because planning and writing a good application generally take a great deal of time, it is important for you to contact the appropriate personnel at the agency and determine their level of enthusiasm for your proposal before committing much effort to the endeavor.

To be a successful grant-getter, certain traits will stand you in good stead. Salesmanship is important because applying for funds is really a matter of convincing the funding agency that your idea is worth investing in. Research skills are obviously important. Ingenuity and flexibility will allow you to take advantage of the ever-changing priorities of the granting agencies. Writing skills are necessary for drafting a good proposal, and speaking skills become important should your laboratory be site-visited.

Administrative skills help you to manage a productive research team and to stay on top of the accounting tasks that are rerequired to plan the grant budget. Good human relations are a must in order to obtain the support of your staff, colleagues, and funding agency administrators. It's hard to do modern science in a vacuum. No matter how much of a loner you are, you'll need the support of your peers. Patience, persistence, dedication, and hard work are, of course, also essential.

Clever grant-getters also make it their business to be always aware of the funding situation in general, as well as at the agencies of specific interest to them. So, to keep your research relevant, stay abreast of information that examines changing funding priorities. Maintain good relationships with the administrators at your chosen funding agencies and in your own institution's grants office. It's a good idea also to read the publications of the professional organizations in your field, as well as the newsletters of the funding agencies.

Your innovative, feasible research idea—one that will result in a substantive benefit to science or to the public—is, of course, the crux of your grant application. However, as important as it is, the good idea is only part of what you will be judged on. You should also aim to provide certain other bolstering qualifications, such as a history of concentration in a particular research area, an indication of your willingness to devote a substantial amount of effort to the execution of the research, the maintenance of a stable work group, and, evidence of ample publications in peer-reviewed journals.

To be a successful grantee, you must understand the review process of the agency to which you plan to apply. Writing a proposal without such insight is akin to going to a job interview without knowing what the job is. It's also important for you to understand the psychology of the reviewer. An all-too-common remark from attendees, following my workshops on grant-writing, has been, "For some reason, I never thought about the reviewer as a person. Think about the reviewer's workload. Understand what the reviewer needs to know about your project. Assuming that—all other things being equal—a happy reviewer is likely to be a positive reviewer, try to figure out what you can do to make the reviewer's job easier. Above all, don't do things that are likely to irritate the reviewer such as not following instructions, exceeding page limitations, and putting information in the wrong section of the proposal.

Take The Time

You will do yourself an enormous favor by devoting ample time to your proposal. If you have a penchant for procrastination, set up an artificial schedule and deadline for yourself— and stick to it. Writing a good grant proposal takes a lot of hard work. You need time to plan, outline, write, revise, share your proposal with colleagues, revise again, and polish the application. (If you're anew grantee, you also need enough preliminary

results to convince the reviewers that your project is doable—and that you are the person best-equipped to do it.)

Successful grant-getters write their applications with careful attention? and your primary concern should be accuracy. Remember, if perchance you lose your credibility, it will be very difficult to regain! Your second most important concern should be clarity. You may understand your project very well. But if you can't convey your ideas clearly to your readers, your efforts will be for naught. Miscommunication occurs when there is a discrepancy between the sender's intention and the receiver's perception. It's crucial to present your project via a logical sequence of ideas without omitting thoughts that are obvious to you but may not be obvious to the reviewer. Avoid ambiguity. A big problem I see in proposals is what I call the uncommitted pronoun. You begin a sentence with "It." The previous sentence contains three nouns. You know what the "It" refers to but the poor reviewer is left to guess. Be consistent. Consistency in terminology is a big help to readers. Make sure the same language that is used in the text is also used in the figures. If you choose to abbreviate certain terms, don't alternate between the abbreviation and the full word. Assigning matching numbers to specific aims and methods, and to budget items and the corresponding budget justification, is a big help to readers.

Brevity is a sign of clear thinking on the part of the writer and a courtesy to the reviewer. She or he may have a hundred proposals to read besides yours! In addition, if there are stringent page limitations, as in an NIH application, excess verbiage uses up precious space that could better be devoted to matters of scientific relevance. Think about writing "now" in stead of "at this point in time." By getting rid of a half-dozen long-winded expressions, you will have given yourself space for one more substantive statement.

Also important in the written application are emphasis, style, and tone. Emphasis helps capture the reviewer's attention and to orient her or him to what you think is significant. Put the important information up front: Not, "In the previous project period we discovered a new but, "We discovered.a new ... in the previous project period." Style can convey to the reviewer that you are a scientist of quality who pays careful attention to detail. A sloppy style may—consciously or subconsciously—convey to the reviewer that your style in the laboratory is equally casual.

A positive presentation is likely to rub off on the reader. For example, if you did not pursue a particular specific aim proposed in your previous application, the phrase "We did not get anywhere with specific aim X because everything went wrong" gives the reviewer quite a different impression from the phrase "Because of the exciting results we obtained in experiments related to specific aim Y and the several problems encountered in our preliminary work on specific aim X, we decided that it would be better to spend all our time working on specific aim"..Y

Irrelevant Material

When you write your proposal, think about the reader's perspective first and your perspective second. For example, avoid giving information that is irrelevant in the context of your proposal just to impress the reviewer. Think about what the reader needs to know rather than what you want to write. Irrelevant material is likely to confuse and depress the reviewer. Know what the average current grant budgets are at the agency to which you are applying and try not to be too far out of line. 'Don't "underbudget." It only serves to tell the reviewer that you aren't knowledgeable about what it takes to do the research you have proposed. Understand which items in the budget need the most justification. Many novice grantees forget to justify "personnel," often the budget category for which the largest amount of money is requested. Be sure you are using the latest revision of the application form. Know how long the review process takes at the agency to which you are applying so that you may request a realistic "earliest possible start date." Respond to all requests in the original application instructions as well as to all modifications that may have been announced in agency newsletters since the last printing of the instructions.

It is a great advantage to have colleagues read your application before you send it to the granting agency for review. Many seasoned grant-getters take advantage of an informal prereview process: "I'll read your application if you read mine." A few institutions have a more formal in-house prereview board. Ideally, your application should be read by at least three people. One of these should be someone who is intimately familiar with the scientific and technical aspects of your proposal and can help improve the substance of the proposal and find possible flaws in your reasoning. The second reader should be someone who is not intimately familiar with the scientific and technical aspects of your proposal but who understands research and science in general. This person is often a good stand-in for the nonprimary reviewers and can give your proposal an excellent read for clarity. The third person should be a good editor who can help polish the proposal and correct grammar.

Don't assume that everything will go smoothly once you mail the application. Experienced grantees keep track of their applications during the review process. Enclose a stamped, self-addressed postcard with the application so you know that your application reached its destination. Check that a review board assignment has been made in a timely way (six weeks after submission in the case of NIH) and that the application has been assigned to an appropriate review board. If there are exciting new developments in your laboratory after you have submitted your proposal, ask your executive secretary for permission to submit additional materials to support your application. If permission is granted, send sufficient multiple copies of the materials so as not to further inconvenience the administrator in charge of the review board.

To be a successful grant-getter, you need, above all, determination. The successful grant-getter is not permanently discouraged by being asked to revise an application. If that happens, be sure to respond to all comments in the “summary statement,” indicate changes you have made within the body of the application by underlining or by using different typography (as indicated in the instructions), and explain the changes you have made in the “introduction section. Many scientists get funded on the second or third try. If at first you don’t succeed, try again—first at the same agency and then at other agencies. Grant money is hard to get these days, but if your idea is sound, well thought—out and clearly explained, and if your interest matches the mandate of the agency to which you are applying, you stand a reasonable chance of getting funded.

Try Again

If you don’t get funded after several tries and you think you’ve done everything right, try not to take it too personally. Funding agencies are a little like venture capitalists. They are interested in investing funds wisely in particular areas of human endeavor. You can’t sell your dreams to people who don’t want them. The best idea in the world will not lie funded by an agency that is not interested in that topic. But that doesn’t mean that you can’t rework your idea for another agency, nor does it mean that you can’t submit a different proposal to the first agency. If you are beginning to think that you are going to spend all your time applying for funds and never get time to do your research, consider the alternative—no funding, no research at all!—and remember, many of your colleagues are in the same boat, so you’re in good company.

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