

Strategies and Tactics of Grantsmanship

Newbie scientists typically spend most of their grant-writing time and energy devising experimental plans that are detailed, well organized, and interesting. However, although having a sound and intriguing research plan is necessary for getting a grant funded, it is not sufficient. Consider taking a more comprehensive approach to grantsmanship to increase your probability of success. Specifically, consider the following ten rules:

1. Plan to spend months, not weeks, on your grant proposal. Assembling a proposal has many creative and administrative aspects, and therefore takes a while.

No, you needn't turn grant-writing into a year-long, round-the-clock endeavor. But starting nine months to a year before the deadline, you should consciously devote some time to your proposal. Doing so lets you assemble all the necessary components and players—without alienating colleagues, mentors, and mentees as the deadline approaches!

2. Align your proposal with the mission of the funding agency. Funding agencies have both long- and short-term missions, and they must fund work that supports these missions. If your proposal does not further the mission of the funding agency, that organization has no reason to give you money. To learn about what and whom the agencies are funding, visit their online databases, most notably those of the National Institutes of Health (NIH; <http://projectreporter.nih.gov/reporter.cfm>) and the National Science Foundation (NSF; www.nsf.gov/awardsearch).

3. Identify and consult the appropriate program officer for advice on your research plan early in the process. Program officers at organizations like NIH are the decision-makers about what gets funded. They base these decisions on the recommendations from the scientific reviewers, along with the

overarching need to support the mission of the agency. Program officers, who typically are trained scientists themselves, will give you guidance about matters such as the timeliness and perceived significance of your plan and the study section to which you should direct your proposal. Get to know your program officer long before you submit your application. Indeed, once you've devised a rough draft "specific aims" section, contact your program officer by email, including the aims section as an attachment, and set up a time for a phone conversation.

4. Familiarize yourself with the criteria that each funding agency uses to assess proposals. Then shape your proposal so that reviewers can readily see that you have addressed these criteria. For example, NIH has reviewers assess the proposals based on specific criteria: significance, approach, innovation, investigator, and environment. NSF, which has both a scientific and an educational mandate, has reviewers assess proposals for two general criteria: scientific merit and broader impact. The second criterion refers to ways in which the proposed work, as well as its outcome, will educate and train the general population as well as future scientists. To learn more about these review criteria, visit the agency websites and talk to successful grantees about how they addressed the review criteria.

5. For experimental science proposals (which most cell biology proposals are), devise specific aims that can be expressed as testable hypotheses. Ideally, craft these hypotheses so that no matter how the study turns out, something useful will be learned. Avoid writing vague, open-ended specific aims that explore your topic in undefined ways. Remember that you need to convince reviewers that the money they give you will be a valuable investment.



Beth Schachter

Photo credit: Alice Braga



If your proposal does not further the mission of the funding agency, that organization has no reason to give you money.

[C]raft ... hypotheses so that no matter how the study turns out, something useful will be learned.

6. Make sure your specific aims are sufficiently independent of each other that if aim 1 doesn't work out as planned, it doesn't shut down the rest of your proposed research. The specific aims should inter-relate, preferably to address different aspects of a single overarching hypothesis. But a negative outcome of one aim should not make the other aims obsolete. Otherwise the funding agency could argue that it doesn't need to fund the entire project.

7. Make your text easy to read by using clear, simple, persuasive writing with a minimum of jargon. Create a document that can be read and understood by tired, cranky reviewers who may read the proposal in bits and pieces. Not all reviewers will be tired, cranky, and frequently interrupted, but allow for the possibility that one of your reviewers will be. Make your proposal easy for that person to understand and appreciate.

8. Use graphics to your advantage, not to your detriment. Keep in mind that while some reviewers will read your proposal on-screen, others will read it as a printout, perhaps in color but maybe in black and white instead. Don't risk confusing the reviewer who reads your proposal as a black-and-white document. Be sure that all the information you intend to convey in your graphics can easily be seen in any of these document formats. In addition, be sure that graphics that look crisp and well defined on-screen retain their sharpness in the printed version.

9. Make sure that the reviewers are not the first people to read your proposal. Give yourself time for feedback from colleagues and mentors. Have your proposal read by

at least one person in your immediate field and at least one colleague from a more distant field, since that is the likely set of reviewers you may get at the funding agency. Try to get critiques from senior colleagues who have had recent successes at the funding agency you are targeting. Give these colleagues time to provide critical reviews, and give yourself enough time to be able to incorporate their suggestions.

10. If at first you don't

succeed, try, try again! Funding for academic science is limited, which means that many applications don't get funded. But some do! So, learn from your unsuccessful attempts by reviewing those applications and the accompanying critiques with senior colleagues and program officers. Such conversations will help you determine ways to improve the quality of your research plan and its presentation, setting you on the path to successful grantsmanship. ■

—*Beth Schachter, Beth Schachter Consulting and Still Point Coaching & Consulting*

[M]any applications don't get funded. But some do!

Notes

This article is based on a workshop sponsored by the ASCB Minorities Affairs Committee at the ASCB 50th Annual Meeting, December 2010.

The author dedicates this article to Liliana Ossowski, Professor Emeritus, Mount Sinai School of Medicine, a superb cell biologist who also understands grantsmanship and has generously tried to teach those mentees who are capable of listening.

Information about Beth Schachter Consulting and Still Point Coaching & Consulting can be found at www.bethschachterconsulting.com and www.stillpointcoaching.com.