

Faculty Peer Exchange workshop on NSF Funding

Date: Nov 18, 2013

Notes from mentors:

Dominic Packer (Psychology) – Thoughts regarding NSF funding

1. It's a numbers game. Given the highly competitive funding environment, a great deal of excellent work is denied funding on any given round. As such, you should plan to submit proposals multiple times – responding to the feedback you get – and also probably to submit multiple proposals. Looking beyond the NSF and NIH to other agencies and foundations is also a good idea.
2. There is a tension at the heart of a successful grant between proposing transformative research and proposing feasible research. You have to convince NSF reviewers that your project is simultaneously both of these things, which can be a bit tricky because you often don't know whether work with true transformational potential is actually feasible, and work that is known to be feasible often won't be transformative. The solution is to (a) develop a truly transformative idea (either in theory/knowledge or application) and (b) then collect and describe extensive pilot/preliminary data. Proposals are more likely to be successful if they can provide solid evidence for as many of the underlying assumptions or key components of the proposed research as possible. If your proposal rests on several key ideas or processes or components – provide evidence for each of them before proposing how combining them in the way that you intend to will prove transformative. The fact that you have evidence for each key piece of the puzzle will increase confidence in the feasibility of your project.
3. Broader impacts are often the component of proposals that scientists are most uncomfortable with – particularly the act of translating research from the lab to the real world. Broader impacts can take many forms, but it is helpful to recognize that as the scientist, you don't necessarily have to be the person who does the translation. What you do have to do (and have a good plan for) is get your work into the hands of people who know how to make the translation. This plan can include a range of communication tools including the standards (journal articles, conferences, talks at other universities), as well as public lectures and panel discussions at promising locations, websites and blogs (your own or as a guest – e.g., at Scientific American), Twitter and other social media, creating documentaries and books, press releases, making contact with relevant policy makers and industry types, etc.

Kathy Iovine (Biological Sciences) – thoughts about NSF's Funding profile

1. The focus of the NSF is fundamental research and broadening access to science. Proposals with a stated focus on health will be returned.
2. Speak with the program director before you submit - make sure you are submitting to the correct directorate and/or cluster. You may need to speak with more than one PD. Speak with the program director before re-submitting to ensure that you address concerns they may have about the proposal.
3. The pre-review (for pre-proposals) and review process is tough. For IOS, 10 % of pre-proposals move forward for full review. Of those, about 25-30% would be funded. The proposal needs to be written for a broad scientific group. Avoid field-specific jargon that will make it hard for some to understand what you are doing or why it is significant. The proposal needs to be written in an accessible manner. Think about the broader impacts early in the process of writing.

4. Finally, the comment from my PD Dr. Steve Klein - "When you write a proposal, you love it. When you review a proposal, you hate it." Read your proposal like a reviewer - find the gaps in logic and fill them with an explanation or (better) with preliminary data.

J. Toulouse (was program director in the Division of Materials Research-Condensed Matter Physics program in 1996-1997)

1. How a program director (PD) operates
 - a. The process

Around the deadline, the PD receives a very large number of proposals. These must be looked at, reviewers must be identified or panels formed. This is a critical stage at which time your chances of funding may be decided. So, contact the PD well before that time, to explain to him/her what your work is about and what you intend to accomplish. This way they will select suitable reviewers or place your proposal in an appropriate panel. For the same reason, when submitting a proposal, suggesting reviewers is very important. In addition, PDs are always looking for new reviewers so as not to overburden the same individuals all the time.

- b. The person

PDs are funding professionals and their career within the foundation depends on the success of their program, i.e. their grantees: make them look good with your work and they will return the favor. This also means that they try to have a diverse portfolio of projects. Know what the originality of your work is and highlight it.

PDs are not specialists in your particular research area. When meeting with a PD, be concise (they usually do not have much time), only present the main lines of your work, emphasize the originality and impact it can have in general terms. Do not get lost in the details. Be ready to answer pointed questions about why this work/study is important and why you are the right person to pursue it. Simple pointed questions like these can often reveal your level of preparedness and how much thought you have put in your proposed work.

Emphasize the potential impact.

Do not give the impression you are seeking preferential treatment or trying to influence a future decision. Keep the PD informed of your work, even before you have been awarded a grant. Send them highlights (one slide). You can find models of highlights on the NSF website.