Comments for CAREER Discussion

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chemistry
Ledly’s Experience with NSF

- Served on a CAREER Review Panel for NSF in Analytical Chemistry
- Have served on other review panels for NSF (and NIH)
- Reviewed proposals electronically for NSF
- Important discovery: Program manager wants to buy the very best science.

Support your PM.
Process for the Reviewer on the Panel

• Received electronic access to all the proposals before the panel (~25 proposals)

• Specifically assigned about 6 proposals for more detailed review, half as lead and half as recorder; reviewed in advance of meeting

• Panelists descend on NSF HQ early one morning (~8 panelists)
During Panel Review

- Panelists discuss the individual proposals. Lead reviewer guides the discussion & recorder types. Discussion is about 10 minutes per proposal. (Panelists at little individual tables)

- Panelists then go into session where they are asked to sort and then rank the proposals (Big tables)
  - Triage out poor and scientifically flawed proposals
  - Segregate remaining proposals into a middle and top group
  - Recommend for funding or not; rank the top proposals
  - Essentially, asked to identify any outstanding proposals that really deserve funding
Panelist’s Perspective

• From panelist’s perspective, little different than reviewing regular proposals to NSF
• Still satisfy review criteria:
  – Intellectual Merit
  – Broader Impacts

• So it is about writing a great proposal…
How to write a great proposal:

Best word of wisdom for proposal writing

“Concise and Compelling”

“When I review a proposal, I read the first two pages. At the end of the first two pages, I have decided if the idea warrants funding. If sufficiently attractive idea to fund, the PI has the remaining pages to convince me my initial assessment is wrong.”
Clues to Write a Great Proposal

1. What is the canvas area? (NSF: 15 pages)
   Map It!
   a. First two pages to make the case
   b. Remaining 13 pages:
      1. Introduction
      2. Proposed solution / idea
         1. Argument to why it will work
         2. Preliminary data
      3. Specific plan
      4. Objectives
      5. Broader Impacts
Clues to Write a Great Proposal

2. First 2 pages:
   ► Make your case.
   ► Make it imperative.

(40% of your time, most of it polishing)

If you have preliminary data, put single most impressive plot/result bottom of first page

Paragraph 1: what is known?
Paragraph 2: what is the question?
Paragraph 3: what is the approach? (fundamentally)?
Paragraph 4: “Here, we propose…”
Clues to Write a Great Proposal

2. First 2 pages:
   ► Make your case.
   ► Make it imperative.

(40% of your time, most of it polishing)
Lots of white space

If it is transformative, say it here. Use the word *transformative*.

Add diagram or two
Keep it clean.
Make it interesting.
Sell the concept.

Top page: Importance of the problem

Middle page: Specific and Broad Objective (Bullet list)

Bottom page: Summary including statement of intellectual merits and broader impacts (bullet list?)
3. Remaining 13 pages:
   1. Introduction (~2 pages)
   2. Proposed solution / idea (~4 to 5 pages)
      1. Argument to why it will work
      2. Preliminary data
   3. Specific plan (~3 to 4 pages)
   4. Objectives and restatement of why this proposal (~1 page)
      • Intellectual Merit
      • Broader Impacts
   5. Broader Impacts (< 2 pages)
Document Format and Style: Low Level

• Make it interesting.
• Sell the idea.
• Precision of Presentation → Precision of Thought
• Active Voice – dynamic thought, propel the reviewer
  (*If PI is not excited, …*)
• Remove excess words (in order to…, parentheticals)
• Figures, tables, and captions are important
• White space
• Grammar
• Equations ? (Where does the idea come from and is the PI equipped to evaluate it?)
• Get someone to proof the science and the grammar.
Because the Reviewers Know…

When you care enough to send the very best.

Your