

Writing More Competitive Grant Proposals

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Is this a great country, or what?

- You can send a document to someone asking for thousands of dollars and they just may give it to you!

Of course ...

- They often don't give you the grant——
- My first rejection was from PRF.
Essentially the same proposal to Research Corporation was funded (RC program officers more astute in their judgment!!!)
- Four NSF rejections (research grant) before I finally got one funded

Definition of Undergraduate Research

Undergraduate research is an inquiry or investigation conducted by an undergraduate that makes an original intellectual or creative contribution to the discipline

- Original work
- Peer-reviewed publications
- Undergraduate Research Summit

<http://www.bates.edu/x50817.xml>

Follow the Guidelines

- Catastrophic consequences
 - CCLI Phase 2 – Multi-institutional
- Creates doubt about attention to detail
- Is your work appropriate to the agency?

Review Criteria

- Significance – quality of research
- Approach – experimental method
- Innovation – novelty of work
- Investigator – expertise/record in field
- Environment – infrastructure to support work

Significance of Work

- You need an excellent idea
 - Significant (not low-impact)
 - Exciting
 - Ambitious (but not too ambitious if at an undergraduate institution)
 - Not just a continuation of or derivative of prior work (not incremental)
- Should lead to a long-term research agenda

Generating Ideas

- Read the literature
- Seminars – structure your department seminar program to assist the faculty
- Conferences (especially smaller ones – Gordon Conferences)
- Collaborate
- Informally test your ideas on colleagues

Reviewers Need Convincing

- A proposal is not a manuscript.
- You are trying to sell someone your ideas and your plan for implementing your ideas
- Explain the significance of your work to the discipline and possibly to society – why your work is important and needs to be done

Experimental Plan

- Well designed – likely to succeed
- Experiments well thought out – will accomplish what you want to investigate
 - Not wishful thinking
 - Not a laundry list
 - Focused and integrated
 - Just enough details
 - Provide plan B if plan A is risky

Other Considerations

- Be succinct in your descriptions
- Insure that the literature references are thorough, but:
 - don't inundate the proposal with references in an attempt to impress through sheer numbers
 - don't reference all your own work – only those publications that apply

**Note (for those at
undergraduate institutions)
that all of my comments so
far relate to the SCIENCE**

Investigator/Environment

- Convince the reviewers that the infrastructure and expertise is in place to complete the work
 - Dedicated lab space
 - Equipment
 - Other resources that support your work
 - If equipment/expertise not in place – establish a collaboration and document it with an attached letter

Involvement of Undergraduates

- Address the impact that the work will have on undergraduates
- Convince the reviewers that undergraduates can undertake your line of work (or establish collaborations for especially ambitious/specialized parts of the project)
- But remember – it's the SCIENCE

Other Advice

- Find colleagues who will provide substantive and critical comments on a draft of your proposal
- Listen to those colleagues
- If the proposal is rejected, resubmit a revised version that addresses the criticisms raised by the reviewers
 - Unless the criticism is that the general idea does not merit funding
- Talk to the program officer

One thing I know for sure

You won't get a grant unless
you submit a proposal