

CRC Grant Writing Tips

Here are some general tips for writing your application (modified from NIH Website- “How to write a research grant” http://www.ninds.nih.gov/funding/write_grant_doc.htm)

- Your application should be based on a strong central hypothesis.
- Be sure your project has a coherent direction.
- Don't be overly ambitious - your plan should be based on a feasible timetable.
- Specific aims and experiments should relate directly to the hypothesis to be tested.

A. Hypothesis/Specific Aims

- The specific aims should be driven by the hypothesis you set out to test. Make sure they are highly focused.
- Begin this section by stating the general purpose or major objectives of your research. Be sure all objectives relate directly to the hypothesis you are setting out to test. If you have more than one hypothesis, state specific aims for each one. Keep in mind your research methods will relate directly to the aims you have described.
- Choose objectives that can be easily assessed by the review committee. Do not confuse specific aims with long-term goals.

B. Background and Significance

- It is the investigator's responsibility to convince the reviewer of the significance of the proposal. State how your research is innovative, how your proposal looks at a topic from a fresh point of view or develops or improves technology.
- Show how the hypothesis and research will increase knowledge in the field.
- Justify your proposal with background information about the research field that led to the research you are proposing. The literature section is very important because it shows reviewers you understand the field and have a balanced and adequate knowledge of it.
- Use this opportunity to reveal that you are aware of gaps or discrepancies in the field. What gaps will your research proposal fill?
- Preliminary data, if included, should support the hypothesis to be tested and the feasibility of the project.

- Preliminary data may consist of your own publications, publications of others, unpublished data from your own laboratory or from others, or some combination of these.
- Include manuscripts submitted for publication. Make sure it's clear which data are yours and which others reported.

C. Research Design and Methods

- Organize this section so each experiment or set of experiments corresponds to one of your specific aims. What questions are being asked?
- Convince reviewers that the methods you chose are appropriate to your specific aims, that you are familiar with them. If your methods are innovative, show how you have changed existing, proven methods while avoiding technical problems.
- The Research Plan must be self-contained. If an appendix is included, it should not be used to circumvent the Research Plan page limits.

1) *Approach*

- State why you chose your approach(es) as opposed to others.
- If you are choosing a nonstandard approach, explain why it is more advantageous than a conventional one. Ask yourself whether the innovative procedures are feasible and within your competence.
- Call attention to potential difficulties you may encounter with each approach. Reviewers will be aware of possible problems; convince them you can handle such circumstances. Propose alternatives that would circumvent potential limitations.
- Spell it out in concise detail. While you may assume reviewers are experts in the field and familiar with current methodology, they will not make the same assumption about you. Provide just enough detail to show you understand and can handle the research.
- Make sure any proposed model systems are appropriate to address the research questions and are highly relevant to the medical problem being modeled.

2) *Expected Results*

- Show you are aware of the limits to - and value of - the kinds of results you can expect based on current knowledge of the subject. State the conditions under which the data would support or contradict the hypothesis and the limits you will observe in interpreting the results.
- Show reviewers you will be able to interpret your results by revealing your understanding of the complexities of the subject.
- If appropriate, describe your proposed statistical methods for analyzing the data you plan to collect. Define the criteria for evaluating the success or failure of a specific test.

Other ‘Pointers’

- Describe sources of reagents, animals or equipment not generally available. If collaborators will provide them, include letters from the sources in your application.
- Include supporting data. Where appropriate, include well-designed tables and figures. Use titles that are accurate and informative. Label the axes and include legends. Reviewers will look for discrepancies between your data and text.
- Include relevant publications. If you (or your collaborators) have publications showing your use of the proposed methods, put them in the appendix.