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MCRP FOR NATURAL SCIENCES TIPS ON WRITING AN APPLICATION

Title: The best is to include both the scientific objective and significance in the title. Probing X in order to study Y for new solutions to Z.

Abstract: State your scientific objective and the significance of that objective. 1-2 sentences on the how. Always start with the scientific objective.

The Future: In addition to describing the future goals of the project, the investigator should also describe his or her plan to establish a vibrant research program that includes engaging students, regularly presenting at professional conferences and at other institutions, regularly publishing in peer-reviewed journals, and regularly seeking external support from peer-reviewed sources.

Budget summary: Cost share is calculated on the basis of the total project cost. For example, if the total project cost is \$75,000, the minimum 20 percent cost share is \$15,000. If a piece of equipment is requested and it costs more than \$1,000, the cost share for this item is 50 percent, making the total cost share to be greater than 20 percent.

Budget: Follow instructions given in the Guidelines and the Instructions documents. Do you have students listed? How many? Is it clear you know how much they cost, etc.?

Education/Experience: List all educational experiences – including summer schools such as the Marine Biological Laboratory and sabbatical experiences. It shows you are still involved in research and have built a research community.

Publications of the PI: The max is 10 and the investigator should list as many as possible – of whatever type. It is best to see publications from the most recent years. Always put them in chronological order.

History of Support: Include any outside funding – especially NSF or NIH funding for programs or equipment. Next, include internal funding. Have you been applying for internal awards, summer fellowships for your students, etc., to keep your research going?

Proposal Narrative:

Sentence 1: The scientific aim of your research.

“The scientific objective of this proposal is to...”

Sentence 2: The significance of your scientific aim.

“Understanding X is significant because”

Early in the document, it is nice to have a list of pithy aims (not required, but useful):

Aim 1:

Aim 2:

Aim 3:

Some background (1 paragraph). Why is this relevant? Why is this up to date research?

Next provide general methods/approach. It does not have to be specific to which pipettors you will use, but it should be clear that you could perform the research and that you can also explain how to perform the research to undergraduates.

Figures with visible writing. Too small fonts are not useful, and will be ignored. Too big is also not effective, it unnecessarily takes up precious space in the proposal. Reviewers typically like clear graphics.

Inclusion of undergraduates. It is best to explain along the way how undergraduates can perform each of the methods you describe. If they cannot do a certain step, explain how it is to be accomplished (collaborator, outside contractor, etc.). At the end, a summary of any innovative ways to include undergraduates would be a nice wrap up.

Include a timeline. It is a good part of project management to make reasonable estimates of how long each part will take. It also shows the reviewers what you will do when, that you can manage a multi-faceted project, have a good idea of how long things will take, and demonstrates where you personnel will be used. For instance, you ask for 3 students for 3 years. Is that 1 student per year? Or is it 3 students each year? If so, what will they be doing? All doing the same thing? Or different aspects simultaneously?

References: Make sure your references are recent and adequate. If you are working on a hot topic, your most recent reference should not be from 4 years ago! Also, have enough references. If you have half a page of space for references, use half a page. If you are working on something interesting, other people should be working on it and writing papers. Also, reviewers should not be able to search your title and find a relevant paper from someone else – not you – on the same topic that you have not cited!