RAP/OREF GRANT FORMAT

SPECIFIC AIMS (1 page, use all of it) Most important part of the grant.

Opening Paragraph:

In this paragraph, your goal should be to introduce your research subject to the reviewers and quickly capture their attention. This paragraph should describe the significant gap in knowledge that directly relates to the critical need the funding entity deals with. It is critical to know your funding entity's mission statement and ensure the critical need you are trying to fill fits well within its mission. It should include the following information: **FIRST SENTENCE/HOOK, What is known, Gap in Knowledge, Critical Need.**

2nd paragraph:

In this paragraph, your goal should be to introduce the solution that fills the gap in knowledge. It is critical to convince your reviewers that you (and your colleagues) have the solution to address the current knowledge gap and the expertise to accomplish this solution. Keep your wording simple, relevant, and to the point. You will want to address the following points:

- What do you want to do?
- Why are you doing it?
- How do you want to do it?

3rd paragraph:

If space, there should be a 'central hypothesis' and goal of the project. Can then state that you will accomplish the goal with the following Aims:

AIMS:

In this section, you will describe briefly each of the aims you will use to test your hypothesis. Ideally, the aims should be related, but not dependent, upon each other. If you do this, the failure of one aim (or an unexpected result from one aim) does not negatively influence any other aim or prevent the completion of the other aims.

- Give your aim an active title that clearly states the objective in relationship to the hypothesis.
- Include a brief summary of the experimental approach and anticipated outcomes for each aim.
    - Example: **Aim I: To determine the accuracy and precision of a novel BESS test in assessing balance during concussion recovery.** We will examine primary parameters of stability (balance, coordination xxxx) in controls and patients after concussion and compare them to the gold standard laboratory BESS stability test. We hypothesize that xxxx.

Final Paragraph

This final paragraph of the Specific Aims is often overlooked, but it is vital for the impact of your proposal. Think of your Specific Aims page as an hourglass, where the wide parts represent the general information and global significance, and the narrow parts are the fine details. If you end with the Aims Section (above) you will end on fine details and a narrow scope. An hourglass with a narrow base is unstable and will topple. Therefore, this final paragraph creates a firm, broad base to support your entire proposal.

BACKGROUND:

The goal of this section is to expand on the first paragraph of your aims, without repeating it verbatim. This should take about **1 to 1 ½ pages** and should answer the following questions in general to get at the significance of the project.

Does the project address an important problem or a critical barrier to progress in the field? Is there a strong scientific premise for the project? If the aims of the project are achieved, how will scientific knowledge, technical capability, and/or clinical practice be improved? How will successful completion of the aims change the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field?

Writing a clear background should similar to the introduction of a paper but it can also be more conversational to try and persuade the reader that the studies that you are proposing are important and feasible to do (especially in a resident grant.

It is reasonable to add in figures if are showing an important flowchart or key images that will break up the viewing.

General style tips:

1. Use the narrow margin format to allow for space
2. Arial, 11pt, justified. The whole grant. Make it look like a professional grant and readers will appreciate it.
3. Spaces between paragraphs, and make sure the figures and legends are clear. Use square or tight picture formatting to wrap text around figure.
4. Print it out and look at it prior to submission—make sure it looks as good as possible.

Innovation:
This is a bit tricky because you want to express the idea that the project is novel, but not so novel that the approach is going to seem somewhat out of left field. In general the innovation is scored as follows:

- Does the application challenge and seek to shift current research or clinical practice paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation, or interventions? Are the concepts, approaches or methodologies, instrumentation, or interventions novel to one field of research or novel in a broad sense? Is a refinement, improvement, or new application of theoretical concepts, approaches or methodologies, instrumentation, or interventions proposed?

For OREF grants it is probably most practical to focus on how the current study will apply a feasible technique in a novel way.

Approach:

Preliminary Data

If there is any preliminary data to support your aims, it should be put in here. Even if this is from your mentor as preliminary data, it is OK to include. This goes a long way to show some forethought and goes towards feasibility. If you have a bit of preliminary data, you can put in a power analysis here. This can also be a section to review data that was been done in a very similar manner at the institution or by the faculty mentor. This can show feasibility of the data even if it is not directly tied to the data.

Specific Aim: State your specific aim from the aims
Hypothesis: State your Hypothesis (expand a bit on the hypothesis under the aims.

Rationale: Why are you doing this and what do you expect to get out of this Aim:

Approach: This is a detailed explanation of how you are going to do the studyThe first paragraph should describe in clear language how the experiment is set up, who is going to be included, who is going to be excluded, and how many patients are to be in the study, etc.

The second paragraph should describe the outcomes that are going to be assessed and how are they going to be collected. This should be broken down into the data collected (when, by who, etc).

The next paragraph should describe the statistical analysis of the data. How is the data to be analyzed, what statistical comparisons are going to happen. Be clear about your primary and secondary outcomes.

Expected Outcomes: What do you expect to see? This can be relatively short, but should suggest what you think will happen with the study.

Potential Problems and Alternative Solutions: This is a very important part of study design and of your grant. Think of 1-3 potential problems with this aim (getting enough patients, variables out of your control, etc) and think of ways that you get around the problem with a different approach. This is also a good place to say something along the lines of 'all the methods described are feasible with the current research group as we have experience with xxxx. However, there may be some anticipated challenges including xxx.'

Notes:

- For a 6 page grant, each aim should take up approximately 1-1 1/2 pages
- Flow charts and tables break up grants nicely and can help explain experimental design
- The approach should make the grant sound feasible. If the reader has to read it more than once to understand, you made it too complicated.
- Each aim should have the sections above, Do not skimp on writing the methods out as it shouldn't be that all the methods work for both aims. However, it is ok to say that a similar approach will be used in both aims.

Timeline
Not necessary but should include a theoretical timeline at the end. Can be a bit creative.