Specific Aims (1 page)

The Introductory Paragraph

- Introduce your research subject and convey a sense of importance/urgency
- Provide a high-level summary of the state of the field (2-5 sentences)
- Clearly identify a gap in knowledge that needs to be addressed.
- Describe how there is critical need to address this gap.

"Currently, a major obstacle in the field is…"
"Although… has been studied, it not currently known whether…"

The What, Why, How Paragraph

- This paragraph should directly flow from the gap statement.
- Convey that you have the solution to address the knowledge gap.
- State the major hypotheses underlying your proposal.
- State the long-term goal of your proposal.
- Provide key support for your hypotheses.

"To address this problem, we propose to…"
"The feasibility of this approach is supported by…"

The Specific Aims

- In order to test your major hypotheses, you will break your project into 2-4 specific aims
- Describe each aim and summarize the experimental approach (2-4 sentences per aim)
- Use headings, bullets, etc. to improve readability

- *Aim 1: Synthesis of Fe Complexes. We will synthesize…*
- *Aim 2: Measuring Photoluminescence. We will test the … of the complexes synthesized in Aim 1…*

Payoff Paragraph

- What is innovative about your proposal?
- What are the expected outcomes of the project?
- If your project is successful, how will it impact science or the public?

"Our approach is novel, because…"
"If successful, this project will yield…"

*You should have one well-crafted figure on the Specific Aims page that summarizes the goal of the project and how it is broken down into the specific aims.

Research Strategy (5 page)

1. Significance (approximately 1/2 page)

- **Why should we care if this project is accomplished?**
- *In this section, assume you are able to successfully complete your project, and describe the impact that the results will have on the scientific community and/or the public.*
- Does the project address an important problem or a critical barrier to progress in the field?
- How will successful completion of this project change the field?

2. Innovation (approximately 1/2 page)

- **How is this different from what others have done?**
- *First, clearly identify the key prior results*
- Are there novel concepts or approaches?
- Is the project narrowly or broadly innovative?

3. Approach (approximately 4 pages)

- Your approach should be **hypothesis driven** rather than being reliant on screening or "fishing expeditions".
- Summarize key pieces of background information to support your hypotheses.
- Be specific about your designs and about the experimental techniques you will use.
- Demonstrate that you are sufficiently knowledgeable to carry out this research.
- Demonstrate that there is a high likelihood of success.
- Identify the parts of your proposal that may be risky (low probability of success) and identify alternative strategies.
- How will you evaluate the success of your approach? Provide clear benchmarks for success.

- Summarize general approach in 1-2 paragraphs
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- Each specific aim will have its own section

  3.1 Aim 1
  3.2 Aim 2
  3.3 Aim 3

References (no page limit)