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

   - Each specific aim will have its own section

   3.1 Aim 1
   3.2 Aim 2
   3.3 Aim 3