Grantsmanship 101: Developing and Writing Effective Grant Applications

Session 3: Crafting Effective Specific Aims
General Considerations for Specific Aims

• The *Specific Aims* section is arguably the most important of the application.

• The *Specific Aims* constitute the template or master plan for the rest of your Research Plan.

• The *Specific Aims* section should include everything about your application that is important and exciting – without the detail.

• The *Specific Aims* will be used by the SRO to recruit reviewers for your application.

• Most members of the study section will only read the *Specific Aims* (and Project Summary/Abstract) before they vote a score.
General Considerations for Specific Aims (cont.)

- The *Specific Aims* section should be written to create a partnership with the assigned reviewers: you provide the conceptual framework upon which they hang the details of what will be done.
Writing Specific Aims

• Create a bullet outline (no text!).

• Consider organizing bullets within *four* distinct paragraphs:
  • Introductory paragraph
  • “What, Why, Who” paragraph
  • Specific Aims “paragraph”
  • “Payoff” paragraph
Writing Specific Aims: Introductory Paragraph

• The **opening sentence** must be an *interest-grabbing* sentence that immediately establishes the relevance of the proposal to human health.

  • You want to convey that, by supporting your proposal, the reviewers will be helping NIH accomplish its goals.

• A statement of **current knowledge** will help less expert members of the panel get up to speed with respect to what is known about the topic of the application.

• Introduce what is missing in sentences that identify the **gap in knowledge**. It is the gap in knowledge that is holding back the field and is what you will address in the application.
Writing Specific Aims: “What, Why, Who” Paragraph

• The **long term goal** projects the continuum of research that you will pursue over the course of multiple periods of grant support.
  • This component tells the reviewers what the “big picture” of your research program is.

• The long term goal is followed by the **objective of this application**, which defines what it seeks to accomplish.
  • This component must link back to the *gap in knowledge*, and emphasize the *product* and not the process.

• The **central hypothesis** must link to the *objective*, because the objective will be accomplished by testing the central hypothesis.

• The final component, **rationale**, conveys *why* you want to conduct the proposed research. Your *rationale* should tell the reviewers what will become possible after the research is conducted that is not possible now!
Writing Specific Aims: Specific Aims “Paragraph”

• The aims are probably the most difficult components to write.
• There must be complete concordance between the aims and the parts of your central hypothesis.
• The aims should be brief, informative, headlines that will attract the reviewer’s attention.
• Each aim should convey why that part of the research is being done, not what will be done.
• Your aims should not be descriptive, and as such you should avoid using words that connote description.
  • “compare”, “correlate”, “describe”, “investigate”
Writing Specific Aims: “Payoff” Paragraph

• This paragraph helps to develop advocacy for your proposal among the majority of reviewers who will not, in all likelihood, have read the complete application.

• The expected outcomes articulate the expected products of the research. This paragraph details the payoff that the reviewers can expect to realize if they vote to recommend funding of your application.

• There should be at least one important expected outcome for each of your aims.

• The final part of the Specific Aims section must summarize the general impact of the expected outcomes. The positive impact statement should make clear that, collectively, the outcomes will advance your field vertically, as well as contribute to the mission of the NIH Institute/Center that you are targeting.
Linear Progression of Logic for a Strong Specific Aims Section

1. GAP
2. OBJECTIVE
3. CENTRAL HYPOTHESIS
4. SPECIFIC AIMS
5. EXPECTED OUTCOMES