How To Write a Research Proposal
What’s a Research Proposal For?
Research Proposals Make You:

- THINK through your experiments
- OUTLINE steps in your proposed research
- Provide Intellectual CONTEXT
- JUSTIFY your research
- Anticipate a realistic TIMETABLE
- Be CREATIVE
- Anticipate Potential PROBLEMS
- (and you can use parts of it in your FINAL PAPER)
What are the Essential Ingredients?
Essential Ingredients

The Issue
What problem does the research address?

Research Design
How will the research achieve its stated objectives?

Benefit
What will the research contribute to existing knowledge?

Figure by MIT OCW.
Who is the Audience for your Proposal?

How will that affect the content?
Guidelines

You’ve been given specific guidelines, follow them to the letter.

All sections in your proposal (except the title) should be identified with corresponding headings that stand out from the rest of the text (bold):

Specific Aims
Background & Significance
Research Design & Methods
References
Your Title is a mini-Abstract

Paint a quick picture of the key ideas

The title should be clear, unambiguous, and not cute
The words should reflect the focus of your proposal
Put the most important words first

Title #1 - Red Haired Musicians and their Preference for Musical Style
Title #2 - Music Style Preference of Red Haired Musicians

The project with Title #1 appears to be focused on Red Haired Musicians. The project with Title #2 appears to be focused on Musical Style Preference.
Write the title last
Why?
Specific Aims

Specific aims are the statements of what you hope to accomplish, but they are not measurable.

- Each specific aim will probably require more than one experiment.

- Have these experiments in mind when you write your specific aims.
Background & Significance

This is the LITERATURE REVIEW we discussed yesterday...remember?
READ, THINK, TALK?

Use this section to show how YOUR PROJECT:

– EXTENDS previous work,

– AVOIDS previous mistakes and/or errors,

– IS UNIQUE because it does not follow the same path as previously followed.
Do This in your B&S

Briefly **SUMMARIZE** what we know so far
(about your topic - not all of apoptosis)

**STATE** what we need to know next
(you can frame is as a question if you like)

**EXPLAIN** why we don’t know it yet
(often a methodological issue)

**DESCRIBE** how you intend to find the answer
Research Design & Methods

LINK each SPECIFIC AIM to each EXPERIMENT you propose.

It might make sense to ORGANIZE YOUR RD & M ACCORDING TO EACH SPECIFIC AIM - (though not necessarily).

Research Design and Methods
Specific Aim #1
Specific Aim #2

NOTE:
Specifically mention innovative aspects of your ideas.
Make sure you do NOT write this section as if it were PROTOCOL.
Overall Quality of Your Study

- Is it a good research question?
- Is the research design appropriate?
- Are your methods rigorous and feasible?
Overall Quality of Your Proposal

- Is the Title informative?

- Are the Specific Aims clear?

- Is the Background & Significance scholarly and pertinent?
Overall Quality of Your Proposal

- Are the Methods appropriate for the experiments?
- Is the timetable realistic?
- Is the proposal clear, concise, well-organized?
Presentation Quality

☐ Are the headings obvious?

☐ Are the schematic diagrams or tables appropriate?

☐ Is the document neat and free of errors?
Avoid the following potential criticisms:

- Not an original idea
- Rationale is weak
- Writing is vague
- Uncertain outcomes
- Problem is not important
- Proposal is unfocused
- Project is too large
Please email Your Outline to Dr. Ogren

Specific Aims

Background & Significance

Research Design & Methods

References

Good luck