Research Plan: Overview

Purpose: The purpose of the research plan is to describe the what, the why, and the who of the proposal. This is the core of the proposal and will be reviewed with particular care.

Recommended Length: The combined length of Parts A (Specific Aims), B (Background and Significance), and C (Research Design and Methods) and Part D (Budget) may not exceed 10 pages (excluding the references). Part E (Biographical Sketch) may not exceed 1 page per researcher (excluding the Mentor). Part F (Mentor Letter) should be about 1 page.

Content: The research plan should answer the following questions:

1. What scientific question do you wish to evaluate (Part A)?
2. In which population will you investigate the question?
3. Based on a review of relevant scientific literature, what have other researchers done in this field (Part B)? (Include appropriate references.)
4. What will this new work add to the field of knowledge (Part B)?
5. How will this research be carried out (Part C)?
6. How much will this research project cost (Part D)?
7. How will your qualifications and experience to date has prepared you to undertake this work (Part E)?
8. How will your mentor support you as you work on this research project (Part F)?

Suggestions:

1. Demonstrate your knowledge of recent literature and explain how your proposed research will further what is already known. Include your list of references at the end of the proposal.
2. Emphasize how some combination of a novel hypothesis, important preliminary data, a new experimental system and/or a new experimental approach will enable important progress to be made.
3. Establish credibility of the proposed investigator and the collaborating researchers.

Part A: Specific Aims (Suggested length: 1 page)

Purpose: The purpose of the specific aims is to describe concisely and realistically what the proposed research is intended to accomplish.

Content: The Specific Aims should cover:

- Your broad, long-term goal
- The hypothesis or hypotheses to be researched
- Specific research aims (objectives)

Suggestions:

1. Begin with a brief narrative describing the long-term goal of the project and the hypothesis guiding the research. This is followed by a numbered list of the Aims.
2. State the hypothesis clearly. Make sure it is understandable, testable and adequately supported by citations in the Background section and by data from any other research.
3. Show that the objectives are attainable within the stated time frame.
4. Be as brief and specific as possible. For clarity each aim should consist of only one sentence. Use a brief paragraph under each aim if detail is needed. Most successful applications have 1-3 specific aims.
5. Be realistic about what you can accomplish. A small, focused project is generally better received than a diffuse, multifaceted project.
6. Focus on aims where you have good supporting preliminary data and that can be backed up with scientific expertise.

**Part B: Background and Significance** (Suggested length: 2 - 3 pages)

**Purpose:** The purpose of the Background and Significance section is to state the problem to be investigated, the rationale for the proposed research, the current state of knowledge relevant to the proposal and the potential contribution of this research to the problem(s) addressed.

**Content:** The Background and Significance section should cover:
- The rationale for the proposed project
- The state of existing knowledge, including literature citations and highlights of relevant data
- Gaps in current knowledge that the project is intended to fill

**Suggestions:**
1. Make a compelling case for your proposed research project. Why is the topic important? Why are the specific research questions important? How are the researchers qualified to address these?
2. Establish your familiarity with recent research findings. Avoid outdated research. Use citations not only as support for specific statements, but also to establish familiarity with all of the relevant publications and points of view.
3. Make sure the citations are specifically related to the proposed research. Cite and paraphrase correctly and constructively.
4. Highlight why research findings are important beyond the scope of a specific project (i.e. how the results can be applied to further research in this field or related areas).
5. Stress any innovations in experimental methods (e.g., new strategies, research methods to be used, interventions proposed).

**Part C: Research Design and Methods** (up to 3 pages)

**Purpose:** The purpose of the Research Design and Methods section is to describe how the research will be carried out. This section is crucial to how favorably an application is reviewed.

**Content:** The Research Design and Methods section should include the following:
- An overview of the experimental design
- Detailed description of specific methods to be employed to accomplish the specific aims
- Detailed discussion of the way in which the results will be collected, analyzed, and interpreted
- A projected sequence or timetable (work plan)
- Description of any new methodology to be used and why it represents an
improvement over the existing ones

- Discussion of potential difficulties and limitations and how these will be overcome or mitigated
- Expected results, and alternative approaches that will be used if unexpected results are found
- Precautions to be exercised with respect to any procedures, situations, or materials that may be hazardous to personnel or human subjects. If institutional review will be required, make note of this in your plan.

**Suggestions:**
1. Number the sections in this part of the application to correspond to the numbers of the Specific Aims.
2. Give sufficient detail. Do not assume that the reviewers will know how you intend to proceed.
3. Avoid excessive experimental detail by referring to publications that describe the methods to be employed.
4. If relevant, explain why one approach or method will be used in preference to others. This establishes that the alternatives were not simply overlooked. Give not only the "how" but the "why."
5. If employing a complex technology for the first time, take extra care to demonstrate familiarity with the experimental details and potential pitfalls. Plan to work with a co-investigator or consultant who is experienced with the technology, if necessary.
6. Document proposed collaborations and offers of materials.

**Part D: Budget Request** (up to 2 pages)

**Purpose:** The purpose of the Budget Request is to present and justify all expenses required to achieve project aims and objectives.

**Format:** Use the attached spreadsheet (next page) to outline your research budget.

**Suggestions:**
1. You can request a stipend of up to $1500 for yourself. Half the amount you request will be paid at the beginning of the project and half at the end of your project.
2. Briefly describe items that are not obvious.
3. Research incentives may consist of a small payment to your research participants or an opportunity to be entered in a drawing for a cash prize.
4. Travel expenses may include travel to present this research at a conference or travel needed to gather your data.
**Budget Request:**

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<tr>
<th>Item</th>
<th>Description (if needed)</th>
<th>Total Estimated Cost</th>
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<td><strong>Personnel</strong></td>
<td>List personnel who will work on the project, the total hours they will spend, salary and fringe benefits.</td>
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<td>Supplies</td>
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<td>Research Incentives (if applicable)</td>
<td>Payments to participants</td>
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<td><strong>TOTAL REQUESTED FROM UW-CTRI</strong></td>
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Part E: Researcher Biographical Sketch (up to 1 page per person)

Purpose: The purpose of the Researcher’s Biographical Sketch section is to describe each of the personnel who will carry out the research project (excluding the mentor).

Content: Each Researcher’s Biographical Sketch should include the following sections:

- **Education**: Begin with the baccalaureate or other initial professional education, such as nursing, and include postdoctoral training; separately referencing residency training when applicable. For each entry, provide the name and location of the institution; the degree received (if applicable); the month and year the degree was received, and the field of study. For residency entries, the Field of Study section should reflect the area of residency. For non-degree education, indicate the time period covered. List professional certifications received within the last 10 years.

- **Research and/or Professional Experience** Address specifically, how you are qualified to address the research question and carry out the specific aims?

Part F: Mentor letter (1 page)

Purpose: The role of the mentor is to provide input on the proposed design and measures of this project. The purpose of the Mentor Letter is to document mentor commitment to the project and show how the mentor will work with the investigator.

Format: Letter signed by the mentor

Content: The Mentor Letter should include the following:

- Name and department of mentor
- Statement of commitment to the project
- Description of frequency of meetings
- Plans for supporting and/or using the research

Suggestions:

1. Note if the proposed research will add in some way to the mentor’s own research or research interests.
2. Mention concrete support to be provided by the mentor— materials, space, etc.
3. Letter can be submitted electronically, but should be followed by a **signed** letter.

Proposals should be sent to:
Madeline Oguss
Center for Tobacco Research and Intervention
1930 Monroe St., Suite 200
Madison, WI  53711
mkoguss@ctri.medicine.wisc.edu
608-265-5552

**UW-CTRI will accept proposals until Wed, September 13, 2010 at 3pm.**