Steps in Writing an NIH Research Proposal

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Step 1  
- Idea
- Choose a submission deadline and stick to it (give yourself enough time)

Step 2  
- Read one or more successful R01/R03 proposals
- Read previous literature and related literatures
- Formulate 1 to 3 specific research questions
- Investigate data, materials, institutional arrangements, collaborations, anything else you need to get the project done

Step 3  
- Prepare 3-page summary of project (including research questions, data, methods, etc.)
- Get advice from experienced colleagues and NIH program officer
- Get started on human subjects review

Step 4  
- Prepare proposal draft
- Get started on administrative paperwork/budget

Step 5  
- Get experienced colleagues and program officer to read and critique proposal
- Revise the proposal (probably several times)
- Don’t give up or decide to wait until the next submission deadline

Step 6  
- Submit proposal

Step 7  
- Get feedback after the review (talk to program officer; read written review)
- Show review to colleagues and get advice

Step 8  
- Revise your proposal and resubmit
NIH Research Proposal Structure

1. Specific Aims (1 page summary)
   - Introduction to the topic
   - What specific questions you plan to answer (2-5 specific questions or goals)
   - Brief summary of data and type of methods to be used (1-2 sentences)
   - Why this study is important and/or innovative. What study will contribute. Why the reviewer should care about this topic and study.

2. Background and Significance
   - Very focused literature review (not a general summary) centered on what we know about your specific research questions, what we don't know, and what you will add to the literature
   - Clear conceptual framework or theoretical approach (drawn from the literature review) that you will use to guide your analysis
   - Why this issue is important and what will we learn from your study

3. Progress Report/Previous Studies
   - Summarize any previous work you have done on this topic
   - Summarize other previous work you’ve done that is related to this project
   - Summarize qualifications of investigators to carry out this study

4. Data and Methods
   - Very specific, clear and well-organized roadmap or game plan showing how you will conduct the analyses which with answer the 2-5 specific questions in your specific aims
   - Can be organized around the questions or goals in Specific Aims (To answer this question I will…)
   - Can be organized around stages of analysis (first I will do this…..next I will do this…)
   - Use illustrations of how you will conduct analysis
   - Make sure all salient details of data, sampling, data quality, potential biases and limitations of data are described
   - Be realistic about the strengths and limitations of your study are. Don’t oversell or undersell your solutions to problems that have plagued past studies.
   - Don’t ignore methodological or data problems – recognize them and explain how they will be handled