

## Student Doctor Research Proposal Checklist

1. Decide on a general field of study. You need to be excited and interested in your topic. Choose something that you have been curious about for a long time or for which you have a personal stake. Then start with the end in mind: find the posted due dates for funding deadlines or timelines for submission
  - a. For example, to realistically perform research during the summer, you should send a final research proposal to the research committee by March 1. Follow this rough timeline to stay on track: July – December, idea development, literature review, and mentor identification; January - February, research question development and proposal writing; March 1-10, submission to research committee; April-May, submission to other compliance boards and research prep; June 1, begin research.
  
2. Generate an idea for research. A good place to start is answering a very specific question within the general field of study that you are motivated to learn more about. This could be a question, a specific area of research, or even a proposal that you've been thinking about. (Pro Tip: Don't study the whole ocean. Select a specific tide pool, a specific organism, and a narrow time frame for your study.)
  
3. Faculty Mentor : Discuss your research idea/question/proposal with a Faculty Mentor with relevant expertise, time and lab experience (if lab-based) to refine your idea, frame your question into a hypothesis and mentor the start of your research endeavor. You may need to 'interview' faculty to find the right mentor. Ask a prospective mentor "How interested are you in my idea?" "How much time do you have time to mentor me?" "What could you provide as a mentor?"
  
4. Literature Search: perform a literature search with the help of the Medical Librarians ([library@idahocom.org](mailto:library@idahocom.org)). In addition to personal tutoring, they have developed several videos stored in Panopto that will open your eyes to how to really search the literature. Schedule a time with her for guidance on a literature search. ICOM has wonderful resources available, use them! Things to keep in mind for your literature search:
  - a. Search both broadly and narrowly.
    - i. Search for relevant articles on the general topic to get a broad view of research that's already been done in the field.
    - ii. Search narrowly to see if your specific question has already been answered, or if a similar question has already been answered.
  - b. Look for gaps in the knowledge presented in the literature that might make an interesting question or topic for research-especially if your question has already been thoroughly researched!
  - c. Synthesize and summarize relevant research after your literature search and if necessary, reframe or modify your question/idea/hypothesis.

5. Meet with your faculty mentor to discuss your findings from the literature search and if that has altered your question/idea/hypothesis.

More questions to keep in mind:

- Will your research involve human subjects, specimens or data?
- Where will your research take place?
- If your research is lab-based, what materials will you require? ICOM's research lab is equipped for biomedical research: cell culture, DNA/RNA/protein extraction and analysis, gene expression and cloning, microbiology up to and including Bio Safety Level-2. Research with radioactive materials or materials illegal in the State of Idaho is not permitted.
- Will your research involve biological materials? Chemicals?
- Is the scope of the proposed research narrow enough such that meaningful information can be gathered in a somewhat limited time frame (6 months- 2 years)?
- Are there opportunities for internal or external funding?
- Are there opportunities for collaboration with other educational institutions? Ex. Boise State University, College of Idaho, NNU, other COMs?

6. Take the Responsible Conduct of Research for Biomedical research OR Social and Behavioral Responsible Conduct of Research via CITI. Request assistance in accessing training documents from Joanna Lewis, Lab and Safety Compliance Manager or Dr. Todd Coffey, Chair of Research.

7. Prepare a research proposal with the guidance of your mentor. Use the [Guidelines on Writing a Proposal or Grant document](#) for further tips and ideas for preparing a proposal.

8. Edit and refine your research proposal with the guidance of your mentor.

9. Submit the proposal to Dr. Todd Coffey, Chair of Research. The ICOM research committee meets once monthly and rigorously reviews all research proposals for: justification/rationale for the research, a clearly defined hypothesis, methods that outline that the research will answer the intended scholarly question, and appropriate safeguards to ensure compliance, data, and the good name of the College.