Instructions to Students: All QSB thesis proposals should be written according the following guidelines and specifications. Questions on the thesis proposal writing should be directed to the student’s advisor and/or thesis advisory committee members. Student should establish a proposal due date with their committee (usually about 1 month before the qualifying exam), to allow for enough time for committee review before the exam.

Page Format and Font: One inch margins all around, Arial font, 11 point, single spaced.

Specific Aims (1 page maximum):

- State concisely the goals of the proposed research and summarize the expected outcome(s), including the impact that the results of the proposed research will exert on the research field(s) involved.
- List succinctly the specific objectives of the research proposed, e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop new technology.

Research Strategy (6 pages maximum):

Organize the Research Strategy in the specified order and using the instructions provided below. Start each section with the appropriate section heading – Significance, Innovation, Approach. Cite published experimental details in the Research Strategy section and provide the full reference in the Bibliography and References Cited section.

(a) Significance

- Explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses.
- Explain how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.
- Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.

(b) Innovation

- Explain how the application challenges and seeks to shift current research or clinical practice paradigms.
- Describe any novel theoretical concepts, approaches or methodologies, instrumentation or interventions to be developed or used, and any advantage over existing methodologies, instrumentation, or interventions.
- Explain any refinements, improvements, or new applications of theoretical concepts, approaches or methodologies, instrumentation, or interventions.

(c) Approach

- Describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims of the project. Include how the data will be collected, analyzed, and interpreted as appropriate.
- Discuss potential problems, alternative strategies, and benchmarks for success anticipated to achieve the aims.
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- If the project is in the early stages of development, describe any strategy to establish feasibility, and address the management of any high risk aspects of the proposed work.
- Point any procedures, situations, or materials that may be hazardous to personnel and precautions to be exercised. Students should note whether or not they have receive the appropriate laboratory safety and training for their experiments, and if all research compliance issues have been completed or in progress (e.g. IACUC approval, radiation safety training)

Timeline and Milestones (1 page maximum):

Outline, by year, what specific milestones are expected to be met for the proposed project, including expected completion of the project aims and the expected time for the thesis defense.

Preliminary Studies (6 pages maximum):

Preliminary data is an essential part of any research grant application and helps to establish the likelihood of success of the proposed project. Discuss the any preliminary studies (student’s own data, PI’s data, or experience) pertinent to this proposed thesis work.

Bibliography & References Cited (no page limit)

Provide a bibliography of any references cited in the proposal. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Include only bibliographic citations. Students should be especially careful to follow scholarly practices in providing citations for source materials relied upon when preparing any section of the application.