

Guidelines for Research Proposal for the Advancement to Doctoral Candidacy in the Endocrinology and Animal Biosciences Graduate Program

Introduction

Doctoral students have three requirements they must complete to advance to candidacy. These are 1) passage of a written comprehensive exam; 2) submission and approval of a written research proposal and; 3) oral defense of the research proposal. Although these requirements are further detailed in the Bylaws of the Graduate Program in Endocrinology and Animal Biosciences (version amended in Feb 2010), there are no guidelines for the written research proposal. The purpose of this document is to standardize the format of the research proposal and to provide a set of guidelines to be followed by each student.

Proposal Guidelines (modified from American Heart Association and NIH pre-doctoral fellowship requirements)

The research proposal must be developed with the student's advisor, but it should be written entirely by the doctoral student. The document should be written in English and created as a Microsoft Word-processed document. Each student must comply exactly with the format/type requirements and page limits below. **The proposal must be submitted electronically as both a PDF and Word file to the Graduate Program Administrator at least ten days in advance of the defense and before being sent to the committee members to ensure formatting requirements have been met. Failure to comply with the proposal guidelines or to submit the proposal ten days in advance will result in rejection of the research proposal.**

- Must be single-spaced and single sided.
- Each page must have 1/2" margins on all page borders.
- Arial or Helvetica Font style, 11 point font size.
- Figures, tables and figure legends may be small text, but should be clearly legible.
- Eleven page minimum, but should not exceed 15 pages (Excluding References). Figures, tables and figure legends must be included within the 15 page limit.
- Referenced citations can conform to any desired peer-reviewed journal guidelines, but must include name of all authors, the article and journal title, volume number, inclusive page numbers and year of publication. In addition, corresponding citations should be referenced in the research proposal text by first author et al. and year.
- Limit references to primary (original) research articles. Review articles should be cited only sparingly.
- There is no page limitation for the references section, but please cite only relevant publications.
- Use of a reference management program (i.e., End Note, Reference Manager, etc.) is required. Contact Aaron Delarosa (delarosa@aesop.rutgers.edu) or Rutgers IT department for questions concerning available software.
- Additional resources used in the conceptual or methodological structuring of the proposal (e.g., descriptive protocol, preceding experiments, etc) can be included in a separate Appendix section.

The research proposal needs to follow the outline given below, in the same sequence. All items should be addressed. The suggested lengths (in parentheses) are guidelines only, but the entire proposal (including items 1-5) should not exceed the 15-page limit.

1. Title, abstract and academic integrity statement (1 page)

The front page of the research proposal should include the title, student's name, advisor's name, and abstract (250-word limit). In addition, the following statement of compliance with the Rutgers University Policy on Academic Integrity (see <http://academicintegrity.rutgers.edu/policy-on-academic-integrity>) should be included at the bottom of the front page of the proposal:

***I have read the current Rutgers University Academic Integrity Policy.
I understand these principles and will abide by them in all aspects of my work
at Rutgers, including this dissertation proposal and my dissertation.***

2. Specific Aims (1 page)

Provide a clear, concise summary of the aims of the work proposed. Clearly state the hypothesis to be tested and how the specific aims relate to the hypothesis.

3. Background and Significance (4 to 4.5 pages)

Sketch the background leading to the proposal. Summarize important results outlined by others in the same field, critically evaluating existing knowledge. Identify gaps that this project is intended to fill. State concisely the importance and relevance of the research to the related fundamental problems.

4. Preliminary Studies (1 to 1.5 pages)

Describe concisely previous work completed by the student related to the proposed research that will help to establish the feasibility and rationale. An “**Appendix**” can be included if more space is needed for relevant preliminary studies. This should be listed at the end of the proposal and does not count towards the 11-15 pages limit.

5. Research Design and Methods (6-7 pages)

For each of the aims, clearly describe the hypothesis to be tested as well as the underlying rationale.

Description of proposed tests, methods or procedures should be explicit, sufficiently detailed, and well defined to allow adequate evaluation of the approach to the problem. Describe any new methodology and its advantage over existing methodologies.

Clearly describe overall design of the study, with careful consideration to statistical aspects of the approach, the adequacy of controls, and number of observations, as well as how results will be analyzed.

Discuss the expected results, potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the aims.

As part of this section, provide a tentative sequence or timetable for the proposed research.