Department of Pharmacology
2015 Oral Preliminary Exam Instructions for the Student

The purposes of the oral exam are to evaluate and strengthen the student’s abilities to conceive and organize an original research project, and to discuss that project in a critical manner with other scientists. The following guidelines should assist both the students and the examiners in conducting the exam fairly and efficiently.

I. Choice of a topic

The first step in this process is for the student to decide on an exam topic. The nature of the chosen research problem often has a great impact on the course of discussion during the exam, and the care given to its selection should not be underestimated. Consider the following rules in choosing the topic.

The topic:
- Can be, but is not restricted, to the student’s thesis topic
- Cannot be identical to material contained in mentor’s current or previous grants
- Should be a question relevant to pharmacology and pharmacological principles
- Must be in an area in which there is significant expertise within the department
- Concisely states a specific hypothesis
- Sets specific aims that are realistically achievable using available experimental means
- Should be of practical or theoretical significance

II. Assignment of a Preliminary examination Chair

Once the student has identified a topic, it should be formulated as a specific hypothesis. The student needs to provide an abstract containing a testable hypothesis with significance and one or two specific aims. The document containing the abstract with hypothesis and aims must be reviewed and signed by the mentor. This completed document should be submitted to Eileen Ferguson by the stated deadline (March 20, 2015).
III. Organization and submission of the written proposal

Preliminary Examination Timeline 2015

Jan 26, 2015  Student Meeting with Graduate Program Director. Discuss the prelim exam and timeline.

Feb 20, 2015  Deadline for Submission of prelim topic.

Feb 26, 2015  GPC meets to approve topics and assign committee chair.

Mar 20, 2015  Provisional specific aims page submitted to committee chair. Prelim committees chosen by the GPC.

April 17, 2015  Student sets the date of oral exam and books a room for the examination.

May 1, 2015  Student submits completed proposal to Prelim Committee.

May 4-30, 2015  Prelim Exam Period. All exams must occur during this interval.

The organization of the final proposal (4-6 pages, total length, excluding references) should be as follows:

A. Overall objective. This is usually a concise statement of the hypothesis to be tested.

B. Specific aims. State the specific intermediate goals that will be met in order to test your hypothesis.

C. Significance. This section should convey to the committee the reasons for interest in the exam topic. Briefly sketch the background to the present proposal, critically evaluate existing knowledge, and specifically identify the gaps which the project is intended to fill.

D. Experimental Design and Methods. Discuss the overall experimental approach that will be used to accomplish your specific aims (diagrams or flow charts may be useful).

Briefly outline the procedures to be used (details such as amounts of materials used, etc., should not be included unless they are variables in the experiment; you should, however, be sufficiently familiar with these details to discuss them during the exam, if necessary).

Give examples of the sort of results you anticipate, and how you intend to analyze and interpret these results.

Illustrate where difficulties are likely to be encountered and what contingency plans you have made.
Provide a tentative timetable or sequence for the investigation.

**III. Format of the oral exam**

The student should plan on presenting the proposal using the organization outlined in part II, above, as a guide. The student is allowed a short, uninterrupted period of time (10-15 minutes) for presenting the Overall Objective and Specific Aims of the proposal, after which questioning may begin. The total length of the exam should not exceed 2 hours. Remember, that the focus of the exam is on pharmacological principles and any principles from the didactic classes are fair game during the exam.

**IV. Evaluation of the student’s performance**

In order to facilitate an objective and consistent assessment of the student’s performance, each examiner will be asked to consider how well the following criteria have been met.

The student:

(1) was able to state the proposed hypothesis and its significance clearly and concisely

(2) had anticipated some of the results which would be expected from the planned line of experimentation

(3) was able to derive a logical interpretation or course of action, when challenged with an alternative explanation of the data

(4) could explain how the proposed line of experimentation would answer the major questions posed

(5) was able to define a critical experimental endpoint at which the likelihood of success of the project could be determined
I. Read the instructions given to the students.

II. Determine the feasibility of the topic for the exam. If the student’s topic is their dissertation topic, the feasibility of the topic should be much less of an issue, but please review. The students will come to you with a stated hypothesis and one or two specific aims but the project may still require some direction from you. Although selection of a research topic is part of the process being tested, presentation of a diffuse or otherwise difficult project may cause the examination to become bogged down on definition of objectives, without allowing an adequate opportunity to test the student's analytical skills. It is, therefore, to everyone’s benefit that the chairperson carefully review the research topic with the student.

Note the exam must be completed by May 30, 2015.

III. Select a committee. The committee is assigned by the GPC and the department Chair. The Preliminary Exam Chairperson in consultation with the student can choose to add an outside cognate member if necessary.

IV. Review the initial proposal. Upon receipt of the proposal the chairperson should determine if the topic is a reasonable one, and whether it is sufficiently well defined. Any serious problems should be brought to the student’s attention as soon as possible to permit sufficient time for amendments. The committee chairperson should approve a final version of the written proposal, confirm the participation of the committee and a date for the exam. Students should be encouraged to discuss this document with other members of the exam committee prior to the exam.

V. Conduct the exam. The format for the exam is included in the instructions to the students. The chairperson should excuse the student for a few minutes before the exam, to allow the committee to discuss the student’s background, to distribute guidelines of the assessment of the student, and the rules for the exam, etc. The student should not be interrupted during the first 10-15 minutes of presentation, after which questioning may take place. The chairperson should ensure that the questions asked by the committee are reasonable, and that one or two members of the committee do not dominate the exam. The exam should not exceed two hours.

The student’s research director may NOT attend the exam. The student will have two chances to take the oral preliminary exam. In the case of a retake, the student’s mentor must be present. Failure of the second exam will result in dismissal from the program.

VI. Assess the student’s performance and make recommendations to the GPC according to the guidelines on the attached sheet.
DEPARTMENT OF PHARMACOLOGY

Prelim Examinations

Evaluation of a student’s performance in the oral examination

The purpose of this part of the examination is to:

1. Evaluate and strengthen the student's abilities to conceive and organize an original research proposal and to discuss that project in a critical manner with other scientists.

2. To assess if the student should be recommended to the GPC for advancement to candidate status.

In order to facilitate an objective and consistent assessment of the student's performance, the preliminary examination committee must consider how well the following criteria have been met.

The student:
(1) Identified a relevant problem or question of importance in the field and wrote a coherent research proposal.
(2) Was able to state the proposed hypothesis and its significance clearly and concisely.
(3) Had anticipated some of the results which would be expected from the planned line of experimentation.
(4) Was able to derive a logical interpretation or course of action, when challenged with an alternative explanation of the data.
(5) Could explain how the proposed line of experimentation would answer the major questions posed.
(6) Was able to define a critical experimental endpoint at which the likelihood of success of the project could be determined.
(7) Showed an acceptable knowledge of the general principles of pharmacology.

Immediately after the examination the Chair must convene a meeting of the committee in the student's absence to provide an overall assessment of the examination performance. Note the only choice is Pass or Fail.

A letter evaluating the student’s performance must be completed by the Chair. This evaluation should not only inform about the student's performance and a pass/fail recommendation but should also provide an important source of feedback for the student. Specifically the evaluation should state how well the student did on each component, identify areas of concern and make recommendations as to how performance can be improved. All members of the committee should agree on the form of words and the evaluation must be signed by the committee Chair.

The evaluation letter, including a pass or fail recommendation, is sent by the Chair to the CPG. The final decision as to whether the student may proceed to candidate status...
is made by the GPC and is also dependent on other factors, in particular class and laboratory performance. The Chair of the GPC will provide the final decision in a letter to the student which will also include feedback on the student’s performance.

Immediately after the committee meeting the Chair should meet with the student to give the general impression made upon the committee and the recommendation that will be sent to the GPC. **The recommendation of a pass requires agreement of the committee by a substantial majority.** Any other result will be deemed a fail. However, the final decision as to whether a student proceeds to candidate status resides with the GPC. Please try to make the situation as clear as possible to the student and make sure the student fully understands the situation.