

# Nsc 5461: Cellular & Molecular Neuroscience

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## Discussion Guide

### Goals of the Discussion Sessions:

- to learn to read original research papers in cellular and molecular neuroscience in a critical manner
- to discuss and evaluate experimental design, the presentation and analysis of data, and the interpretation of data in research papers
- to learn to lead a group discussion on research papers
- to study topics covered in lectures in greater depth and to learn about topics not covered in the lectures

One research article will be assigned for each discussion session. The class will be divided into two groups to discuss the article. Two students will be chosen ahead of time from each group to lead the discussion of the article. These two students should read the article well in advance and then *meet together with the faculty member* assigned to that group. This meeting should occur several days before the presentation and will serve to answer questions the students may have concerning the paper. Additional reading and consultation of resources will generally be necessary and expected of the co-presenters so that they can supply background material during the discussion session.

The student co-presenters are responsible for: (1) providing background information (5-10 min) on the discussion topic; (2) organizing discussion of the paper around the major results and interpretations; (3) answering questions from other students or faculty in the group; and (4) stimulating discussion among the other students. The co-presenters should determine the presentation format and content prior to the discussion session.

**ALL STUDENTS ARE REQUIRED TO READ THE ASSIGNED ARTICLE** and should be prepared to answer the focus questions listed below. The faculty member will evaluate all students on their participation during the discussion session and will grade the performance of the two student leaders of the discussion. The faculty member will e-mail a grade and comments to the two student leaders shortly after the session.

### Focus questions:

- What are the objectives of the research? What are the main hypotheses tested and questions asked by the investigators?
- What preparation and methods are used to obtain and analyze the data?
- What results are obtained and observations made? Be sure that you understand what information is being conveyed in each figure in the paper.
- Are the appropriate control experiments included?
- Are the methods appropriate for the objectives?
- Are the results interesting and important?
- Do you agree with the researchers' conclusions? Are alternate explanations consistent with the data?