

# NEURODEGENERATIVE DISEASES

## Biology 490 Seminar, Section 3

Fall 2012

### Instructor Information

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### Course Information

When: Tuesday 12:00 – 12:50

Where: TNR 122

### Course Description and Objectives:

This seminar course will broadly examine recent research advances in neurodegenerative diseases and pathology as well as the advantages/disadvantages of using of transgenic animal models and other animal models (i.e. drosophila) to study neurodegenerative diseases. Each week one student will lead the presentation and discussion of a primary literature article related to a neurodegenerative disease of their choice. You will gain experience in the areas of literature search, scientific format, and preparation of an oral presentation. Class attendance and participation is required.

### Course Grading:

The format of the course will include two components: student presentations and attendance/class participation. Student presentations will be worth 50 points and class participation and attendance will be worth an additional 50 points.

### Grade Scale (out of 100 points):

A ≥ 93-100	C = 73-76
A- = 90-92	C- = 70-72
B+ = 87-89	D+ = 67-69
B = 83-86	D = 60-66
B- = 80-82	F < 60.0
C+ = 77-79	

### Student Presentations:

Each student will be required to give a presentation and lead the discussion on a chosen neurodegenerative disease and a recent primary literature article investigating one aspect of the disease. Discussion leaders will be expected to provide relevant background material, which may require the use of online index searches and interlibrary loan, so please plan ahead. If you are unfamiliar with the use of online indexes please see a librarian or ask the instructor for assistance. Individual presenters will also be asked to turn in a handout of your presentation and a bibliography of sources to the instructor on the day of their presentation/discussion. Presentations will be graded by the instructor and will be graded on content, format, and overall knowledge of the subject matter. To promote discussion and understanding of the topics being presented, participation by the audience is necessary. Therefore, when you are not leading the discussion, you will be evaluated on your level of participation. Please read through the selected article (to be sent out via email and posted onto D2L the week before the presentation) and come to class with questions about the selected article.

## **Hints for Presenters:**

Critical reading of primary literature is not an easy thing to master, and the only way to get good at it is to do it often. It is a skill that many of you will carry onto your professional careers. If you go onto graduate school, you may find yourself in a journal club with faculty and other graduate students doing exactly what we are doing in this seminar, reading and discussing current research. In graduate school and several other professional careers, you will be expected to keep up to date on current research in your area of expertise. You will be expected to identify how these studies fit into your study, what the strengths and weakness of the study are, and how you might even improve or add to the study.

The most challenging part of reading primary literature is identifying the important points in the paper. As a presenter, it is your task to summarize the paper and prioritize what should be discussed. Below is a rough sketch of how to go about this, but every paper is different, so you will want to keep an open mind.

Summarizing the article can be approached by asking the following questions:

1. *What questions (hypotheses) are being asked in the paper? What is the paper about? Why did they do the work?* This information is typically found in the introduction.
2. *How did the authors go about answering these questions? What was the experimental design?* This is found in the methods section.
3. *What were the findings of the paper? What are the broader implications of this research?* This information is found in the results and discussion section.

You should assume that all other students have read the paper and have a copy of the paper in front of them. They should have notes and questions they have regarding the paper. However, if a lull in the discussion occurs you can ask the audience broad topic questions such as:

- Was the methodology appropriate for the questions being asked?
- How could the experimental design be improved?
- Did the conclusions follow from the data clearly? Could other conclusions be drawn from the data that the authors did not mention? Or did they draw too big of a conclusion from their data?