

## Membrane and Cellular Biochemistry MBIO 3460 LAB EXAM OUTLINE

**Date:** Friday, Nov 25, 2011  
**Time:** 2:30 pm (both sections)  
**Duration:** 1.5 h  
**Location:** 306 Buller

### Policy:

The lab exam is part of the final course examination. Department of Microbiology appeal procedures will be followed.

### Format:

- Answer exam questions in pen - NO PENCIL
- Bring a non-programmable calculator
- Short answer to medium length questions.
- Answers acceptable in point form
- Same format as sample lab exam at back of lab manual

### Information responsible for:

- All information in lab manual (introduction, procedures, and appendix).
- All information in lab reports.
- Questions geared to understanding procedures - principles involved.
- Must know why you carry out a particular step. Understand function of each procedure step. Must know the important solutions involved if related to function.
- Must know the function of each component of a solution. If a complex solution, I will give you the components and you explain why each component is added.
- Questions to ask yourself: What is happening at each step? Explain why and how.
- Must be able to explain the function of all equipment used in the lab?
- For Lab 1 Table 1 responsible for information only as it applies to ubiquinone and questions asked on lab report.
- Responsible for Lab 2 Table 1 (Barker 1991) apparent MW only with respect to human and sheep.
- For Lab 2 responsible for membrane proteins numeric values (as presented on lab report) but not required to know the name of each membrane protein.

### Results and Data analysis:

- Must know expected results.
- Must know how to analyze data. For example must know how to calculate ubiquinone concentration from a given set of data. Responsible for all calculations.

### Appendix:

- Responsible for all information in appendix.
- Exceptions - you do not need to know how to program the Himac centrifuge. However, you are responsible for knowing how to centrifuge samples using the large centrifuge, eg. balance tubes, etc. You do not need to know how to run the Spec 3100 and computer data collection software given in appendix.
- Not responsible for Excel software operation. However, you are responsible for all information and calculations that pertain to your experiments that you did using Excel spreadsheets, for example, using a regression equation for calculations.

**Lab report information**

- Responsible for all information in your lab reports.

**Media/solutions:**

- Must be able to prepare any solution used in lab. In this type of question you are given all information required - do not need to memorize the components. This is a detailed question - you will be given the components and need to tell me exactly how to prepare the solution.

**References:**

- Responsible for reference material used to answer lab reports questions.

**EM Tutorial information:**

- Responsible for basic information.

Any questions? My office is 414B Buller.