

MBIO 618A Special Topics in Immunology

Advanced Immunology I: Innate and Adaptive Immunity

Spring Semester

16 sessions per semester, 1 hr 40 min per session

SPRING 2009: Wednesdays 3:00-4:30, Room B-107

Course Description

Each topic will begin with lecture(s), which build from the information presented in Introductory Immunology up to the current state of knowledge, providing substantial depth in the subject. Current research literature will be assigned and the students will be expected to read that literature prior to class. Each student will be required to submit answers to a brief questionnaire directed toward analysis of the assigned research literature. The completed questionnaire must be provided to the instructor at the beginning of the class session. **The questionnaire is posted on the Blackboard Website and can be down-loading as needed. The assigned journal manuscripts will also be posted on the Blackboard website by Friday before the Wednesday lecture.** During the session students will be asked to explain and/or comment on various aspects of the research literature being discussed. The goal of this course format is (1) to acquire substantial depth of knowledge concerning the topics, to gain appreciation of that knowledge by applying it to comprehension of current literature, and to gain additional experience in critically reading and analyzing research literature.

Exams and Course Grade

The course grade will be based on 2 exams and on participation in the class discussions. Attendance is mandatory and absenteeism will be considered lack of participation. **Forty percent** of the grade will be based on participation, which includes evaluation of the submitted answers to the questionnaires on the literature and ability to knowledgeably discuss the assigned research literature. **Sixty percent** of the grade will be base on two written exams, which will be composed of short essay questions regarding the basic information presented in the lecture portions of the course.

SCHEDULE (14 lecture sessions)

Innate Immunity

Progression of inflammation and wound healing (Martin)	1/14
TLR, TLR signaling and infectious disease (Hajishengalis)	1/21
NK cells (Alard) <i>cancelled because of ice storm</i>	1/28
B cells (Yan)	2/4
Chemokines and chemokine receptors (Bodduluri)	2/11, 2/18

EXAM 1 **2/25**

Linking Innate and Adaptive Immunity

Dendritic Cells and Antigen Presentation (Alard)	3/4
NK cells (Alard) <i>Rescheduled to this date</i>	(Fri., 2-3:30pm)3/6

Adaptive Immunity

Intra-Thymic Development of T cells (Kosiewicz)	3/11
---	------

SPRING BREAK **3/18**

Intra-Thymic Development of T cells (Kosiewicz)	3/25
T cell activation (Shao)	4/1
T cell memory and homeostasis (Chilton)	4/8, 4/15

EXAM 2 **4/22**

Advanced Immunology

Assigned Manuscript Questionnaire (This form must be handed to the instructor at the beginning of the session during which the manuscript is to be discussed.)

Your Name: _____

Title of Manuscript:

First Author: _____ **Journal:** _____

What was the hypothesis was being tested?

What was the main question being asked?

What was the main experimental approach used to answer the question? (e.g., transgenic mice to overexpress or eliminate a gene; small inhibitory RNA to decrease gene expression; receptor agonists to activate via receptor, etc.)

Which piece of data most strongly supported the conclusions? If you think the data did not support the conclusions, explain why. _____
