

BMS 506: Introduction to Immunology (3 credits)

Syllabus

Course Directors: Gary Winslow winslow@wadsworth.org; 473-2795.

Meeting time and location: Tuesday 3:30-5:00; DAI Auditorium.

Participating Faculty:

Wadsworth Center: Drs. Gary Winslow, Katherine MacNamara, Susan Wong,
Maria Lopez, William Lee, David Lawrence

Albany Medical College: Drs. Constantine Bitsaktsis, Eric Yager

Course Description: This is an introductory immunology course designed for non-majors, or individuals beginning their study in the field. Nine lectures on fundamental immunological processes will be presented and these will be followed by 3-4 weeks of student presentations. The goal of the formal lectures will be to provide students with the fundamental knowledge of the immune system. The students will apply the basic knowledge to a specialty area. The latter will form the basis of a 20-30 minute oral student presentation in an area of their interest. Quizzes on the formal lecture material and the required reading will be used to evaluate the students' learning, and will be given the week following each lecture.

Learning objectives:

- Develop a basic understanding of fundamental immunological processes.
- Identify the major cellular and tissue components which comprise the innate and adaptive immune system
- Demonstrate an understanding of how white blood cells, including lymphocytes, develop from undifferentiated precursors

- Learn how highly variable lymphocyte receptors are generated from a limited amount of genetic information.
- Acquire a basic understanding of the fundamental of the Major Histocompatibility Complex
- Understand how immune responses by CD4 and CD8 T cells, and B cells, are initiated and regulated
- Be able to discuss how the immune system distinguishes self from non-self
- Gain experience investigating and presenting a special topic related to immunity in health and/or disease

Prerequisite: Introduction to Cell and Molecular Biology or permission from the instructor. Students should be familiar with basic principles of biomedical sciences.

Textbook: Immunology, by Kuby et al. 6th edition.

Grading: Weekly quizzes on lecture material (40%), oral presentations (20%), final exam (40%).

Sample course organization and schedule:

Course organization Spring 2008

date	Lecture #	TOPIC	LECTURER
1/29/08	1	overview	Gary Winslow
2/5/08	2	cells and organs/techniques	Kate MacNamara
2/12/08	3	innate immunity/complement	Susan Wong
2/19/08			Winter break
2/26/08	4	ags and antibodies	Constantine Bitsaktsis
3/4/08	5	Ig genes/abs	Constantine Bitsaktsis
3/11/08	6	MHC and Ag processing	Gary Winslow
3/18/08	7	TCR/T cells	Jeff Kennedy
3/25/08			Spring Break
4/1/08	8	Cytokines/cell mediated	David Lawrence
4/8/08	9	B cells/leukocytes	William Lee
4/15/08	10	Student presentations	Vaccines, DTH
4/22/08	11	Student presentations	Hypersensitivity
4/29/08	12	Student presentations	Autoimmunity and tumors
5/6/08	13	Student presentations	Infections; transplantation; review session
5/13/05			Final exam