

MIC 321 Fall 2011

The course is made up of seven didactic sections taught by faculty of the Department of Microbiology and Immunology, the Department of Pediatrics and the Department of Medicine at the Leonard M. Miller School of Medicine. A prerequisite for MIC321 is MIC301. An equivalent course from domestic or international institutions may satisfy this requirement under selected circumstances (please contact Roger Williams, the administrative director, for further information).

We strongly encourage you to prepare yourself for the lectures by studying in advance the assigned textbook pages (see curriculum) for a more interactive classroom experience and coherent understanding of the material. We encourage questions and discussions with the faculty and students.

Each section concludes with a unique day that begins with multiple-choice questions constructed by the honor students to prepare the class for the subsequent quiz. The class is encouraged to enter into a dialogue with the presenting students to solve the problem. Next, the students are asked to let the presenters know whether the question was understandable and useful. Afterwards, the written quiz will be taken. Out of courtesy to your peers we ask that you remain seated until the professor has collected all quizzes. If you are interested in the correct answers, you can stay until the lecturer has gone over the correct quiz answers.

You are only permitted to receive a single quiz that must be returned at the time of the quiz collection. All quizzes are numbered to ensure that these instructions are followed. The scores of your quiz will be posted on Blackboard without returning to you the graded quiz. You may request to look over your graded quiz with Roger Williams, the administrative director.

There are seven quizzes, each made up of 22 multiple-choice questions. The five best scores of the first six quizzes will count toward your cumulative score along with the score from the mandatory quiz 7. The max total points are 132. Students are NOT graded on a curve but as follows:

- $\geq 115$ pts = A-
- $\geq 120$ pts = A
- $\geq 100$ pts = B-
- $\geq 105$ pts = B
- $\geq 90$ pts = C-
- $\geq 95$ pts = C
- $\geq 70$ pts = D-
- $\geq 75$ pts = D
- $\geq 60$ pts = F

Class attendance may be taken periodically at the liberty of the lecturers. Please be prepared that we will check your attendance, especially later in the semester when you may have accumulated apparently sufficient points. Therefore, it is recommended that all students attend all classes.

Absences are excused only when you provide adequate documentation from your doctor, a police report, or death certificate of a family member to Roger Williams within two weeks of the missed lecture. Similarly, you will not be allowed to make up a quiz unless you provide the administrative director with the adequate documentation described above for absences. All
makeup quizzes will be administered on the date provided in the schedule. **Two points are subtracted when a class is missed unexcused.**

### SECTION I: LICHTENHELD

**Aug. 25**
Course introduction, historical perspective and basic concepts: Immunity – Thucydides; smallpox – Mary Wortley and Edward Jenner; pathogen attenuation – Louis Pasteur

pp 1-13; 18-22

**Aug. 30**
Historical perspective and basic concepts continued: Antibodies – Emil von Behring and Shibasaburo Kitasato; importance of cells (macrophages) – Elie Metchnikoff; the immune system can cause disease (anaphylaxis) – Charles Richet; antibody and complement work together – Jules Bordet; blood groups express tissue antigens – Karl Landsteiner; immunological tolerance to "self" and its generation – Macfarlane Burnet and Peter Medawar; H-2 (MHC) gene loci govern transplant rejection – George Snell and others

pp 1-13; 18-22

**Sept. 1**
Historical perspective and basic concepts continued: H-2 (MHC) gene loci also govern T-cell recognition – Rolf Zinkernagel and Peter Doherty; Generation of monoclonal antibodies – Milstein and Kohler; generation of diversity by recombination – Susumu Tonegawa; role of danger signals and receptors – Polly Matzinger and Charles Janeway

pp 1-13, 18-22

**Sept. 2**
Last day to register

**Sept. 6**
Solve multiple-choice questions prepared by honor students [Quiz I]

### SECTION II: JURECIC

**Sept. 8**
Tissues of the immune system and lymphocyte migration 13-18

**Sept. 9**
Last day to drop course without a “W”

**Sept. 13**
Innate immunity continued 23-43

**Sept. 15**
Innate immunity continued 23-43

**Sept. 20**
Solve multiple-choice questions prepared by honor students [Quiz II]
SECTION III: PODACK

Sept. 22    Antigen capture and presentation 45-65
Sept. 27    Antigen capture and presentation continued; principles of antigen recognition 45-65; 67-76
Sept. 29    Antibody and T-cell receptor structure and recognition 67-76
Oct. 4      Solve multiple-choice questions prepared by honor students Quiz III
Oct. 5      Academic alerts on MyUM

SECTION IV: ANDREANSKY

Oct. 6      Repertoire generation and selection 76-87
Oct. 11     T-cell activation and differentiation 89-111
Oct. 13     T-cell activation and differentiation continued 89-111
Oct. 14     Fall Recess
Oct. 16     Deadline for Writing Credit approval of literature Lichtenheld
Oct. 18     Solve multiple-choice questions prepared by honor students Quiz IV

SECTION V: DIAZ-MONTERO

Oct. 20     Effector mechanisms of cell-mediated immunity 113-129
Oct. 25     Effector mechanisms of cell-mediated immunity continued 113-129
Oct. 27     Biology of humoral immune response 131-141
Oct. 28     Last day to drop course
Nov. 1      Solve multiple-choice questions prepared by honor students Quiz V
SECTION VI: KHAN

Nov. 3  Isotype switching and affinity maturation  141-151
Nov. 8  Effector mechanisms of humoral immunity  153-171
Nov. 10 Tolerance and autoimmunity  173-187
Nov. 15 Solve multiple-choice questions prepared by honor students  Quiz VI

SECTION VII: STONE

Nov. 17 Tumor and transplantation immunology  189-204
Nov. 22 Hypersensitivity diseases  205-221
Nov. 24 – Nov 27 Thanksgiving Recess
Nov. 29 Immunodeficiencies including AIDS  223-237
Dec. 1 Solve multiple-choice questions prepared by honor students  Quiz VII

Dec. 6  MAKE-UP OF MISSED QUIZ
       LICHTENHELD / WILLIAMS
       See course syllabus for eligibility

Dec 7 – Dec 14 FINALS for classes other than MIC321
Dec. 15 Deadline for Writing Credit
       Hard copy and e-version are due