IMUN 507 - IMMUNE MECHANISMS, 2022

Tuesdays 1:45 pm – 3:45 pm and Thursdays 10:15 am – 12:15 pm
Location: Virtual for 2022

COURSE DIRECTORS

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Course TA for 2022
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COURSE GOALS: There are several goals for this course. First, building on the IMUN 506 foundation, we will further introduce you to basic principles, and current and emerging concepts in cellular immunology. Second, integrating with BIOM 555, we will introduce you to more basic principles, state-of-the art techniques, and current and emerging concepts in molecular immunology. Third, through the student-run journal clubs, we will work together to improve your ability to critically evaluate primary literature, orally present your thoughts to an audience, and engage in scientific discussion.

COURSE DESCRIPTION: Each class will comprise of a faculty-led lecture (~ 60 minutes) and a student-led journal club (~ 60 minutes). The journal club will focus on a faculty assigned manuscript and will include a formal presentation of the paper by a student along with discussion of specific points ('discussion-points', see below for further details) related to the paper that each student will bring to the class. Faculty lectures will be taught from an experimental standpoint and assume basic knowledge of the immune system. To the greatest extent possible, faculty will teach through primary literature, with reference to reviews for background information.

READINGS: Each faculty is expected to provide a few reviews and possibly primary papers at least one week prior their lecture. Students should read these before the lectures. Faculty will also assign at least one journal club paper that all students should also read before the class. Textbooks that may be useful for background reading include:

Janeway's Immunobiology, by Murphy et al; Garland Press

Fundamentals of Immunology by Paul (ed). Raven Press

JOURNAL CLUB EXPECTATIONS: Students will be assigned to present a paper for the journal club portion of each class. These students are expected to meet with the faculty member (who assigned the paper) in advance of the presentation. Students should present: (1) a few introduction slides on background and the problem addressed or hypothesis tested, (2) schematics outlining experimental approaches or procedures for those that are complicated and/ or not routine, (3) essential figures or figure panels, (4) few discussion/closing slides to place the authors' findings within the contexts of the immediate field, immunology, or biology as a whole, and (5) a few concluding slides on new questions you would answer and experiments that you would conduct to do so. Presenters should be critical of the data by pointing out potential flaws. Audience should ask questions, make points, and engage in discussion as often as possible, while letting the presenter get through all of their slides within allotted time.

For each paper, all students should prepare a 'discussion-point' which they should (1) submit in writing before the class and (2) discuss during the journal club presentation. Discussion-points are flexible and can be structured into two parts: (Part-A) a question, interesting point, issues with experimental approach, issues with data, or anything that the student finds interesting in the paper, and (Part-B) a short paragraph about how the issue raised in part-A may be addressed or why the issue is relevant/important. Each student can raise their 'discussion-point' when the presenter of the manuscript reaches the relevant sections or at the end of the paper presentation.

FACULTY EXPECTATIONS: In addition to providing reading materials ahead of time, lecturing, and moderating journal clubs, faculty are expected to be available to meet with students ahead of journal club presentations. Faculty should also provide feedback to the journal club presenters immediately after class ends.

FINAL GRADES: Students' grades will be based on their journal club presentations and their participation (asking questions, engaging in discussions, and submitting the 'discussion points' on time) during all classes. The course directors in consultation with participating faculty will determine final grades.

	Date	Speaker	Topic	Speaker contact
1	8-Feb-22	**Yasmine Belkaid**	Immunity and microbiota	ybelkaid@niaid.nih.gov
2	10-Feb-22	**Craig Bassing**	Lymphoid Malignancies	bassing@pennmedicine.upenn.edu
3	15-Feb-22	**Michael Abt**	Microbiome mediated immune defenses	michael.abt@pennmedicine.upenn.edu
4	17-Feb-22	**Craig Bassing**	Class switch recombination	bassing@pennmedicine.upenn.edu
5	22-Feb-22	**Montserrat Anguera**	chromosome inactivation & sex differences & autoimmunity	anguera@vet.upenn.edu
6	24-Feb-22	**Christoph Thaiss**	Design principles of immune responses	thaiss@pennmedicine.upenn.edu
7	1-Mar-22	**Phillip Scott**	Parasitic infections	pscott@vet.upenn.edu
8	3-Mar-22	**Will Bailis**	Immune Cell Metabolism	bailisw@chop.edu
9	15-Mar-22	**David Hill**	From type 2 inflammation to clinical allergy	hilld3@chop.edu
10	17-Mar-22	**Malay Haldar**	Mononuclear phagocytes in tumor immunity	
11	22-Mar-22	**Michael Povelones**	Mosquito immunity	mpove@vet.upenn.edu
12	24-Mar-22	**Frederick (Chris) Bennett**	Current topics in brain resident macrophages	frederick.bennett@pennmedicine.upenn.edu
13	29-Mar-22	**Jorge Henao-Mejia**	Mucosal immunity	jhena@pennmedicine.upenn.edu
14	31-Mar-22	**Elizabeth Lennon**	Comparative models of inflammatory diseases	mlennon@vet.upenn.edu
15	5-Apr-22	**Neil Romberg**	Human germinal center responses	rombergn@chop.edu
16	7-Apr-22	**Daria Babushok**	Immune manifestations of bone marrow failure	daria.babushok@pennmedicine.upenn.edu
17	12-Apr-22	**Sarah Henrickson**	Primary immune deficiency and immune dysregulation	henricksons@chop.edu
18	14-Apr-22	**Helen Su**	Human Inborn Errors of Immunity with Susceptibility to Virus Infections	hsu@niaid.nih.gov
19	19-Apr-22	**Laura Su**	T cell Memory	laurasu@pennmedicine.upenn.edu