IBMS 7010-5III Microbiology, Immunology & Molecular Genetics (MIMG) Journal Club Spring 2023

Course co-directors:	Elizabeth Leadbetter, Ph.D. (<u>Leadbetter@uthscsa.edu</u>) Ekaterina Koroleva, Ph.D. (<u>Koroleva@uthscsa.edu</u>)
Venue, day and time:	To be held in person, ALTC 2.217 on Wednesday @ 12:00 PM **except March 1 and 8 we will be in ALTC 2.203**

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COURSE DESCRIPTION AND OBJECTIVES

This course involves presentation and discussion of current literature in the fields of immunology and microbiology. This course will be a continuous requirement beginning the fall semester of the second year until the preceding semester of the dissertation or thesis defense.

Prerequisites: None

Semester credit hours: 1

Course objectives:

By the end of this course, each student should:

- gain a better understanding of the most recent high-impact discoveries in immunology and microbiology through an in-depth analysis of the current literature
- be able to facilitate discussion and scientific interaction among all participating members of the journal club class.
- demonstrate improved presentation, scientific discussion and critical analysis skills.

COURSE ORGANIZATION

Schedule

See class schedules on last pages of syllabus

Attendance and Participation

All enrolled students are expected to personally attend all journal club sessions (16 Spring semester journal clubs). **Masks are encouraged, but not required, to be worn during the in person JC.**

The only exception to this attendance policy is in cases of illness or critical family obligations. Requests for excused absences should be made as far in advance as possible and will be considered on a case-by-case basis (please contact Dr. Koroleva, Koroleva@uthscsa.edu, or Dr. Leadbetter, leadbetter@uthsca.edu). Please note that time to perform lab work or study for exams is not considered an acceptable excuse for failure to attend journal club.

Course Requirements:

Oral Presentations: All students must present a paper in <u>at least one journal club meeting per semester (per the schedule).</u> In addition, students will be required to serve as a discussion facilitator at least once per

semester (see details below). Everyone must read the paper prior to journal club and be prepared for discussion. Students are encouraged to print a hard copy, annotate as you read, and bring the paper to the JC to facilitate discussion. All students are expected to actively participate in journal club discussions.

Students should select recent (2021-2023) papers in high-quality and high-impact journals in consultation with, and the approval of, their faculty mentor. We strongly recommend selecting papers from high impact journals (Science, Nature, Immunity, Nature Immunology, Cell, JEM, Cell Host Microbe, etc) which address interesting and timely questions. Be wary of papers presenting non-hypothesis-driven phenomenology, they can be less interesting to discuss. We are hoping to get a diversity of topics covered this year, so you are encouraged to consult Dr. Koroleva and Dr. Leadbetter, your mentors, or other faculty for suggestions outside your area of expertise. The paper topic must also be consistent with general themes in the immunology and microbiology fields (see below). Students are encouraged to choose a paper not directly related to their own work.

At least 8 days prior to the presentation date (and preferably earlier), each student must submit a PDF copy of their paper to both Dr. Koroleva (koroleva@uthscsa.edu) and Dr. Leadbetter (Leadbetter@uthscsa.edu) for final approval. Following approval, the student must forward a copy of the paper to the assigned facilitator as well as to Liz Spillman (spillmane@uthscsa.edu) for distribution to student and faculty members of the MIM Discipline.

When preparing for presentations, the presenters must consult with their faculty mentors to ensure an efficient and effective presentation that will encourage discussion. The journal club course codirectors and other faculty are also available for help with difficult issues related to either the techniques used, or scientific concepts indicated in the papers, if these issues are too difficult to be solved by the presenters themselves. A well-prepared presentation will enable a more productive discussion at the meeting.

When delivering journal club presentations, students should introduce the topic and give sufficient background so that the audience can grasp the problem and the significance of the study given its context in the field. The background review should lead to the overall hypothesis being tested or question being asked by the authors of the paper. The presenters are also expected to be able to explain all techniques/methods/materials used in the papers. For each data figure/table, the presenters should state (a) why the experiment was performed (e.g. what question is being addressed or tested by the particular experiment), (b) how the experiment was performed (e.g. what method was used), (c) what was the result of the experiment and provide a description of the figure/table, and (d) what conclusion was drawn from the results. The presenters should then state their own views on the experiment by identifying potential problems and offering alternative interpretations of the data. After analyzing individual experiments, the presenters should be able to sum up the overall study in a logical fashion, discuss the results in the context of the big picture, offer alternative interpretations of the data, as well as point out potential future directions. Importantly, presentations and discussions should not only include a description of results but also a critical analysis of the paper. Are there flaws in the authors' hypothesis, data and/or conclusions? Is the data of sufficient quality to be convincing? Does the data presented support the claims of the authors? Are the conclusions justified? What is the significance of the findings and do these findings warrant publication in a high-impact journal? It is not recommended, in most cases, that the presenter present every piece of data in the paper...only present the most salient data so as to stay within the time limits of the meeting and to focus the discussion on the most important findings.

Students wishing to change the date on which they are assigned to present a paper or facilitate a discussion must arrange to swap dates with another student. Once both students agree on the change of date an email should be sent to Dr. Koroleva (koroleva@uthscsa.edu) or Dr. Leadbetter (leadbetter@uthscsa.edu) for final approval and cc'd to both students as well as to Liz Spillman (spillmane@uthscsa.edu). Requests for date changes should be made as far in advance as possible.

Appropriate paper topics for this course include, but are not limited to:

Autoimmunity. Innate immunity Inflammation Infection immunity Immunoregulation Immune effector mechanisms Immunopathology Cancer immunity Immune signaling mechanisms Pathogenesis of viruses, bacteria, fungi or parasites Mechanisms of microbial pathogenesis (eg: secretion systems, adhesion mechanisms, etc.) Mechanisms of viral pathogenesis Novel virulence factors Host-pathogen interactions. Innate mechanisms by which hosts detect and eliminate pathogens Role of microbiota in health and disease

Facilitation: All students will serve as discussion facilitator for at least <u>one journal club meeting per semester</u> (<u>per the schedule</u>). The role of the facilitator is to initiate and moderate discussion of the paper being presented with the goal of achieving a high level of participation by those attending the journal club. To assist in achieving that goal, each facilitator will be required to prepare one or two slides to present at the end of the main presenter's PowerPoint presentation. The facilitator should use these slides to outline a couple of major critiques of the paper as if they were serving as a primary reviewer for the paper submitted to the journal. The facilitator is expected to consult with the main presenter and their own faculty mentor to assist them with providing an appropriate critique which does not repeat the summary from the initial presenter.

GRADING POLICIES

Drs. Leadbetter and Koroleva will base grading each semester on (i) the quality of journal club presentations, (ii) the quality of facilitation, (iii) the quality and quantity of each student's participation in the discussion, and (iv) attendance. Grading of the presentation will be focused mostly on the effort put in and the organization and effectiveness of the presentation, not the speaking ability of the presenter. If a student fails to participate in the discussions during the course of the semester, the course directors will lower the student's letter grade for the semester. If a student has more than 2 unexcused absences, the course directors will lower the student's letter grade for the student's letter grade for the semester.

REQUESTS FOR ACCOMODATIONS FOR DISABILITIES

Information regarding accommodations for disabilities is available in the UTHSCSA Catalog. A student who wishes to request accommodation for a disability should contact the Associate Dean for Students, Graduate School of Biomedical Sciences. The Student Request for Accommodations under Americans with Disabilities Act form and additional information may be obtained at http://www.uthscsa.edu/eeo/request.html.

SCIENTIFIC INTEGRITY / PROFESSIONAL CONDUCT:

The expectation is that all students will exhibit the highest standards of scholastic and scientific integrity as elaborated on page 99 of the current UTHSCSA Student Catalog. Any student who commits an act of academic dishonesty is subject to discipline as prescribed by the UT System Rules and Regulations of the Board of Regents. Academic dishonesty includes, but is not limited to, cheating on exams, plagiarism,

tampering with reference materials or files, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person (e.g. copying material from the web without proper attribution), and any act designed to give unfair advantage to a student or the attempt to commit such an act. Failure to abide by these rules of professional conduct will result in a grade of zero for the exam in question and, depending on the nature of the infraction, the consequences may include dismissal from the program.

If you suspect another student of professional misconduct, please bring your suspicions directly to the Course Director. Confidentiality will be maintained at every level during any ongoing investigation of suspected academic or scientific misconduct.

EMAIL POLICY

Every student is issued a University e-mail address and account at the time of enrollment. As a matter of University Policy, communications between students and faculty that occur using the student's University e-mail address are considered official business. Therefore, <u>students are expected to check their university</u> <u>email inboxes on a regular basis</u> so that any announcements, instructions, or information regarding this course will be received in a timely manner. Missed communications due to inadequate monitoring of incoming emails on the University's email server will never be a valid excuse for unsatisfactory academic progress.

USE OF RECORDING DEVICES

Recording of lectures and other learning activities in this course by any means (*e.g.*, video, audio, etc.) is only permitted if approved by the instructor or required for compliance with Americans with Disabilities Act (ADA).

ELECTRONIC DEVICES

Cell phones must be silenced during all class meetings and exams. Computers and electronic tablets are allowed only for participating in classroom activities (*e.g.*, viewing slides presented in lecture or conference materials). Texting, tweeting, emailing, web-surfing, gaming, or any use of electronic devices that is not directly connected with classroom activities is NOT permitted.