Syllabus: BMS 665Q (Current Literature in Biomedical Sciences)

Tuesdays, 3:00-4:30 PM, C530, Biggs Laboratory (ESP), Wadsworth Center

Instructors:

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Learning Objectives:
This course is designed to teach and promote critical reading of the literature. This valuable skill will enhance the ability to understand research that has already been performed, formulate new hypotheses for one's own studies, and logically evaluate the results in light of other reported findings. Students will be taught how to critically evaluate scientific data for content and significance, and to present their evaluation to an audience of peers.

Requirements:
All graduate students must enroll in BMS 665 each semester for the duration of their matriculation. Enrollment may be for 0 or 1 credits, with a maximum of 5 journal club credits to be applied toward graduation for doctoral students; 3 for masters students. Students will attend weekly sessions and present at least once per semester. Papers must be available to the class as least one week prior to the presentation. All students are expected to read the paper before coming to class.

Topics:
All students will analyze and formally present one high-quality journal article, and answer questions about the methodology or conclusions of the paper. Journal papers should generally be less than six months old, chosen from respected, peer-reviewed journals, and must be approved by the course coordinators prior to distribution to journal club participants. Papers should be of general interest to the audience. Students will be expected to present articles and research results in a concise, analytical manner, and will be expected to participate in discussions during presentations by other students or scientists.

In addition, each student will serve as a "reader" for two papers presented by other students. Readers are not responsible for presenting the paper itself, but will be expected to be thoroughly conversant with the findings and other aspects of the report, and to ask detailed questions of the presenter.

Evaluation:
Student evaluations will be based on the quality of presentation, participation in discussions, and attendance. Grading is Satisfactory/Unsatisfactory. More than two absences will result in an Unsatisfactory grade, unless specifically authorized by the course director BEFORE the anticipated absence. Students who find that they will be unable to attend a class in which they were scheduled to present should contact the instructor at the earliest opportunity.

Format:

Each presentation should include the following features:

1) Enough background information to allow the audience to understand the reasoning and hypothesis from which the work springs.
2) A comprehensive presentation of the data in the paper. Since one function of the journal club is the critical evaluation of results, it is important to focus on the data. For each experiment, the student should understand and explain why it was done, how it was done, what controls were used, and the interpretation of the results.
3) A brief summary discussion relating the results presented to other work in the field, and explaining how the work succeeded and why it is important. Any significant inadequacies such as missing controls or unsupported conclusions should be noted.

Meeting details:
Classes will meet in C530, Biggs Laboratory, Wadsworth Center.

Class Schedule:

Date	Activity
September 1	Welcome and course setup
September 8	Demonstration Journal Club Presentation
September 15	In-Class Discussion of Assigned Paper
September 22	Student Presentations
September 29	Student Presentations
October 6	Student Presentations
October 13	Student Presentations
October 20	Student Presentations
October 27	Student Presentations
November 3	Student Presentations
November 10	Student Presentations
November 17	Student Presentations
November 24	No class (break for Thanksgiving)
December 1	Student Presentations

The paper that will be given as a demonstration on September 8 is: Liu, S., Crown, D., Miller-Randolph, S., Moayeri, M., Wang, H., Hu, H., Morley, T., and Leppla, S.H. (2009) Capillary morphogenesis protein-2 is the major receptor mediating lethality of anthrax toxin in vivo. *Proceedings of the National Academy of Sciences (USA)* 106: 12424-12429.