Course Outline: CHEM BIO 2L03

Title: Chemical Biology Laboratory I

Instructor: Dr. P. Harrison
Office: ABB-418  Tel.: 27290  e-mail: pharriso@mcmaster.ca

Content: Laboratory work and skills development in chemical biology.

Detailed Description: In this course students perform a series of integrated experiments that are designed to build up the skills needed to be a practicing chemical biologist. After some experiments to introduce the concepts of protein isolation, analysis, and binding of small molecules, students will prepare a series of small organic compounds as potential inhibitors of the enzyme acetyl-cholinesterase (AChE). These include caffeine; a crude extract of a natural source of their choice; and a library of chalcone natural product-like compounds. Finally, the interactions between the small molecule inhibitors and AChE are explored through an enzyme assay. Emphasis will be placed on instilling a broader perspective of laboratory work, where each experiment builds upon the previous one and has a direct impact on the success of the overall project.

Literature: No textbook is required. Students will use leading literature sources described in each individual experiment, along with their own literature searches, to develop their approach to the experiments, develop a research proposal, and prepare a full professional report on the project that resembles a research manuscript.

# of Lectures: One Lecture/week: overview of project; theory of techniques

# of Tutorials: One Tutorial/week: details of techniques and approach for the next lab period

# of Labs: One 4-hour laboratory period every week

# of Exams: 0 (2 quizzes)

Evaluation: Based on laboratory performance, lab notebook, research proposal, quizzes and reports. See the introduction for further details.

Times: Lectures: Mon., 11:30, BSB-136
Tutorials: Thurs., 11:30, BSB-136
Laboratory: L01: Weds., 13:30-17:20, ABB-217
or L02: Thurs., 14:30-18:20, ABB-217
Office Hours: Tues. 11:30-13:30

NOTE: The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the
student to check their McMaster email and course websites weekly during the term and to note any changes.

Web site: Avenue
Course description, lab manual, lecture slides, etc.

Laboratory: Labs begin on Wednesday, Jan. 11th, or Thursday Jan. 12th, 2017. You’ll meet your TA and general rules on safety will be discussed. The first lab will be performed. Eye protection in accordance with the McMaster eyewear policy is MANDATORY. This means goggles must be worn at all times in the lab. Lab coats are strongly recommended. Open shoes are not permitted. You must obey all safety instructions; failure to do so may result in loss of marks (a negative safety mark) and/or exclusion from the lab with a grade of zero. The lab marks have various components, and are assigned by the Teaching Assistants. Late submissions will be penalized at the rate scheduled in the course manual, unless a MSAF is filed (see below).

Academic Dishonesty: Academic dishonesty is not qualitatively different from other types of Dishonesty: It consists of misrepresentation by deception or by other fraudulent means. In an academic setting this may include any number of forms such as: copying or the use of unauthorized aids in tests, examinations and laboratory reports; plagiarism, i.e., the submission of work that is not one’s own or for which previous credit has been obtained, unless the previously submitted work was presented as such to the instructor of the second course and has been acceptable for credit by the instructor of that course; aiding and abetting another student’s dishonesty; giving false information for the purposes of gaining admission or credit; giving false information for the purposes of obtaining deferred examinations or extension of deadlines; and/or forging or falsifying McMaster University documents.
Academic dishonesty can result in serious consequences, e.g. a grade of zero, loss of credit with a notation on the transcript, and/or suspension or expulsion from the University. It is YOUR responsibility to understand what constitutes academic dishonesty.

For more information, see:
http://www.mcmaster.ca/senate/academic/ac_integrity.htm

In CHEM BIO 2L03, ALL cases of academic dishonesty will be prosecuted to the maximum penalty allowed.

Missed work: Missing one lab does not require a medical: simply continue where you left off, and attend a different lab period: See lab manual for details. If you miss more than one lab, file an MSAF and contact the instructor.
MEDICALS: In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar “Requests for Relief for Missed Academic Term Work”. In brief: If you are absent from the university for any reason, lasting no more than 3 days, you may report your absence, once per term, without documentation, using the McMaster Student Absence Form (MSAF). Absences for a longer duration must be reported to your Faculty/Program office, with
documentation, and relief from term work may not necessarily be granted. Please note that the MSAF may not be used for term work worth 25% or more, nor can it be used for the final examination. When using the MSAF, send the report of your absence to pharriso@mcmaster.ca. You will NOT receive a reply, but you can assume your MSAF has been accepted, unless you are contacted by the instructor.