1-2015

BCH 561.01: RNA Structure and Function

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BCH561– Spring 2015 –
RNA Structure and Function

Special Topic for the semester is Regulatory RNAs

Syllabus

Instructor: Drs. Stephen Lodmell and Jean-Marc Lanchy

Office: CHCB202, 205 Phone: 243-6393, 243-5720

Meeting time: TBD

Meeting place: CHCB202

This class is designed to give students an opportunity to present both primary research and research materials from the current literature concerning the structure, function, and biochemistry of RNAs as they exert regulatory roles in the cell. These RNAs may be small RNAs or motifs of larger RNAs. Specific topics this semester will include, but are not limited to, the mode of recognition of viral and non-viral RNAs by proteins encoded by the virus or by the host, bacterial regulatory RNAs that aid in the change of gene expression depending on the environment, and the regulation of gene expression by natural (e.g. 6S RNA) or artificial (e.g. aptamer) RNA mimetics of other biological targets.

The format of the class is as follows: Each hour class period will be devoted to an individual presentation with group discussion of either original research or a review of a paper from the current literature. Each student will present twice during the semester.

When a student is presenting his/her original research, we will discuss results, problems, interpretations, and future directions of this research in an open forum format. Broad student participation in these discussions is essential.

When the presentation is centered around a current research article, the student will provide each member of the class with a copy of the paper he/she will present several days in advance so that all class members will be familiar with the material for the presentation. The presentation is designed to be a critique of the paper, and the presenter should offer his/her view about experimental design, results, and interpretations. Papers may be on any topic, as long as it is related to RNA, retroviruses, or translation.

Grading/assessment:

This is a one credit course. Grading is on a Credit/ No credit basis. Students will be evaluated on the quality of his/her presentations as well as participation in discussions during class. Students are expected to have prepared for the class by reading the chosen literature article(s) prior to class time to promote informed discussion on the research at hand. Consistent failure to adequately prepare for presentations or discussions will result in a grade of NC.

Presentation schedule:

(TBD)