UCLouvain

wsbim1303

2023

Workshop on experimental strategy in cellular and molecular biology

6.00 credits	60.0 h	Q2

Teacher(s)	Bertrand Luc ;De Smet Charles ;Kienlen-Campard Pascal (coordinator) ;
Language :	French
Place of the course	Bruxelles Woluwe
Main themes	Some experimental strategies, based on a well-defined system, and that gave rise to major breakthroughs in cellular and molecular biology are exposed and discussed. The key experiments will are detailed. Students (in small groups) further elaborate experimental strategies for specific problems: -first, the teacher proposes selected problems in the field of molecular and cellular biology and provides the students with useful informations to elaborate an experimental strategy; -the students propose experimental models and approaches that need to be validated by the teacher; -these experimental approaches are tested and the results obtained are analysed and discussed in the light of published work. -finally, the students present the result of their work to their colleagues and teachers.
Learning outcomes	**At the end of this learning unit, the student is able to :** 1 To integrate fundamental knowledges in biochemistry, cell biology, cell physiology, molecular biology and genetics; To define a scientific question, to translate it in terms of experimental strategy and propose experimental protocols including appropriate controls; To interprete the results, discuss their relevance and compare them to data taken from the litterature; To finally propose some perspectives.
Evaluation methods	The mode of evaluation is a written examination for WSBIM1303T in the first session. An oral examination may be organised in the second session. For WSBIM1303P, the student must submit a research project and defend it orally to the examination board.
Content	This workshop is devoted to train students to work together on scientific projects. -it learns how to define precisely a scientific question and to collect the appropriate informations; -it leads to elaborate and the validate a logical (and chronological) experimental program; -it forms to the critical discussion of experimental results and to their presentation to other students and teachers.
Inline resources	Resources are available on the moodle website of the course
Other infos	Necessary background: basic knowledge in biochemistry, cell biology, cell physiology, molecular biology and genetics. This course can be complemented by a presentation of methods (e.g. SBIM2111: Methodology of Cellular and Molecular Biology), by a tutorial on in-depth questions in cellular biology (e.g. BICL3245: Special Questions in Cellular Biology) and in molecular biology (e.g. DBCM3001: Tutorial in Molecular Biology) Assessment method: The assessment will focus on the quality of the presentation of the experimental approach, the analysis of the results obtained and their critical comparison with the literature.
Faculty or entity in charge	SBIM