

Faculty of Medicine



SBIM2111 Methodology of cell and molecular biology

[22.5h] 3 credits

Teacher(s): Pierre Courtoy (coord.), Emile Van Schaftingen
Language: French
Level: Second cycle

Aims

To get a critical grasp on a few essential methodologies in cell and molecular biology, on which teachers have a special expertise. The course primarily aims at the understanding of basic principles and inherent limitations, so as to help students in selecting the most appropriate approach to address a specific question. This teaching further demands the quantitative analysis of the observations and the differentiation between warranted and unjustified conclusions from a particular experiment

Main themes

Methodologies currently discussed are (1) principles and methods of protein purification, including the calculation of a purification table; (2) principles, applications and safety rules in the use of radioactivity as a tool in biochemistry and cell biology; (3) principles and applications of cell culture; (4) the physical basis, methods, potentials and limitations of analytical subcellular fractionation ; and (5) morphological methods, with emphasis on molecular tracking in fixed and living cells

Content and teaching methods

protein purification; radioactivity as a tool in research; cell culture; subcellular fractionation; molecular tracking in fixed and living cells.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisite : cell biology and general biochemistry

Calendar : second quadrimester, each Thursday, from 14:00 to 15 :45 at ICP 75-1.

Individual support : printed notes

Examination : quantitative analysis of new data obtained with one or several of described methods and usually presented in English; testing of their understanding

Programmes in which this activity is taught

ESP3DS	Diplôme d'études spécialisées en santé publique
ESP3DS/ST	Diplôme d'études spécialisées en santé publique (santé au travail)
MD3DA/FA	Diplôme d'études approfondies en sciences de la santé (sciences pharmaceutiques)
NUT2	Licence en sciences biomédicales (nutrition humaine)
SBIM3DS	Diplôme d'études spécialisées en sciences biomédicales

Other credits in programs

MD3DA/BI	Diplôme d'études approfondies en sciences de la santé (sciences biomédicales)	Mandatory
MD3DA/MO	Diplôme d'études approfondies en sciences de la santé (sciences de la motricité)	Mandatory
SBIM31DS	Première année du diplôme d'études spécialisées en sciences biomédicales	(3 credits)