


2.00 credits

20.0 h

Q1

Teacher(s)	Lemaigre Frédéric (coordinator) ;
Language :	French
Place of the course	Bruxelles Woluwe
Prerequisites	<i>Knowledge on fundamental principles in cell and molecular biology, and in biochemistry taught during the baccalaureate.</i>
Main themes	<i>The course describes the molecular and cell biology of intercellular signaling in normal condition and cancer, the mode of action of anti-cancer drugs, and the interaction between tumor cells and their micro-environment.</i>
Learning outcomes	<p><b>At the end of this learning unit, the student is able to :</b></p> <ol style="list-style-type: none"> <li>1 <i>master the main intercellular signaling pathways, the interactions between tumor cells and their environment;</i></li> <li>2 <i>understand and explain how perturbed intercellular signaling contributes to tumor initiation and progression, and metastasis;</i></li> <li>3 <i>understand and explain how anti-cancer drug modulate intercellular signaling;</i></li> </ol> <p><i>be able to design an experimental approach aiming at the identification of therapeutic targets;</i></p> <ol style="list-style-type: none"> <li>4 <i>- be able to critically address an oral presentation or article in the field;</i> <i>- use the acquired knowledge to address new issues.</i></li> </ol>
Evaluation methods	Written exam with open questions evaluating the student's knowledge and the student's ability to implement the knowledge to solve a biological problem. The course is taught by several teachers. Questions will be asked on all chapters of the course; their weighted value is indicated on the exam sheet.
Teaching methods	Lectures on site.
Content	<p>The course describes the molecular and cell biology of intercellular signaling in normal condition and cancer, the mode of action of anti-cancer drugs, and the interaction between tumor cells and their environment.</p> <p>At the end of the course, the students are expected to master the main intercellular signaling pathways, the interactions between tumor cells and their environment; to understand and explain how perturbed intercellular signaling, abnormal metabolism and cell immortality contribute to tumor progression and metastasis; to understand and explain how anticancer drug modulate intercellular signaling; to be able to design an experimental approach aiming at the identification of therapeutic targets; to use the acquired knowledge to address new issues.</p>
Inline resources	Slides presented during courses and teaching notes are made available on <a href="http://moodleucl.uclouvain.be/">http://moodleucl.uclouvain.be/</a>
Bibliography	The biology of Cancer, R.A. Weinberg, Garland Publishing
Other infos	Prerequisite: fundamental principles in cell and molecular biology, and biochemistry (metabolism) taught during the baccalaureate.
Faculty or entity in charge	FASB

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [60] in Biomedicine	<a href="#">SBIM2M1</a>	2		
Master [120] in Biomedicine	<a href="#">SBIM2M</a>	2		