



Due to the COVID-19 crisis, the information below is subject to change, in particular that concerning the teaching mode (presential, distance or in a comodal or hybrid format).

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| 3 credits | 30.0 h | Q1 |
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| Teacher(s)          | Beuloye Christophe ;Feron Olivier ;Jonas Jean-Christophe (coordinator) ;Kienlen-Campard Pascal ;Pilette Charles ;   |
| Language :          | English   |
| Place of the course | Bruxelles Woluwe  |
| Main themes         | <p>At the end of the year, the student will :</p> <ul style="list-style-type: none"> <li>• know the pathophysiology of the diseases covered during classes, from the molecule to the cell, the cell to the organ, and the organ to the organism</li> <li>• understand/be able to explain the link between the molecular and cellular alterations described and the development of the chronic diseases covered during classes, as well as the mode of action of drugs targeting these alterations and their impact in other organs</li> <li>• be able to analyze and criticize a conference or paper in that field ; use his/her new knowledge and skills to investigate unanswered questions on the topic</li> <li>• imagine new approaches to study the pathophysiology of other diseases</li> </ul>  |
| Aims                | <p>At the end of the class, the student should:</p> <ol style="list-style-type: none"> <li>(1) know the pathophysiology of diseases specifically addressed during the class, not only from the molecular and cellular point of view, but also in a larger perspective (organs, organism);</li> <li>(2) understand and explain the link between the molecular and cellular dysfunction and disease development; understand and explain the mode of action of drugs targeting these alterations;</li> <li>(3) be able to critically analyze a presentation or scientific paper about the subject ; use her knowledge to address new questions in the field ;</li> <li>(4) be able to propose experimental approaches to study the molecular and cellular pathophysiology of other diseases.</li> </ol> <p>-----</p> <p><i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i></p> |
| Evaluation methods  | <p><b>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</b></p> <p>Written examination, unless specified otherwise by each professor.</p> <p>The final note will be the geometric mean of the notes obtained in each part. This means that, in case of a major failure in one part, the final note will be lower than the arithmetic mean of the notes obtained in each part.</p> <p>Questions are written in English, but students can choose to answer in French or English.</p>  |
| Teaching methods    | <p><b>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</b></p> <p>The course consists in a series of lectures or inverted classes on specific topics.</p>  |
| Content             | <p>The classes will cover the pathophysiological mechanisms underlying the development of frequent non-communicable human diseases, the drugs targeting these mechanisms and unanswered questions on the topic (biomedical research). The link between the molecular, cellular, and tissue alterations and their impact on the whole organism will be highlighted as much as possible. Diseases covered during classes: diabetes and its complications ; cardiovascular diseases; respiratory diseases; neurodegenerative diseases ; cancers.</p>   |
| Inline resources    | <p>Slides projected during classes and additional documents will be posted on MoodleUCL.</p>  |
| Other infos         | <p>This course requires good knowledge of cellular and molecular biology, biochemistry of cell metabolism, immunology, cell and organ physiology, and human pathology.</p>  |

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| Faculty or entity in charge | SBIM |
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| <b>Programmes containing this learning unit (UE)</b> |                         |         |              |   |
|--|-------------------------|---------|--------------|---|
| Program title  | Acronym                 | Credits | Prerequisite | Aims  |
| Master [120] in Biomedicine                          | <a href="#">SBIM2M</a>  | 3       |              |  |
| Master [60] in Biomedicine                           | <a href="#">SBIM2M1</a> | 3       |              |  |