



5.00 credits

36.0 h + 18.0 h

Q2

Teacher(s)	Morsomme Pierre ;Page Melissa ;
Language :	English
Place of the course	Louvain-la-Neuve
Main themes	<p>Every year, one particular physio-pathological situation, or a few interconnected ones will be studied. An introduction to the topic will be presented by the professors then, some recent research articles related to the topic will be analyzed by the students, presented orally in front of the group and further discussed together.</p> <p>Among different possible topics, a particular interest will be devoted to more specific ones :</p> <ul style="list-style-type: none"> - Biochemical mechanisms whereby human nutrition affects different cellular and molecular targets and may therefore be involved in a normal metabolic regulation, as well as in pathological deviations. - Cellular and molecular mechanisms that allow the "major" nutrients to control appetite, to affect glucides and lipids metabolism, to induce intestinal and hepatic dysfunctions, but also to "minor" food constituents (polyphenols, vitamins, etc) to reach precise molecular targets, modulating the cellular physiology. - Cellular and molecular mechanisms that generally take during the interactions of pharmacological agents with cells and within applications to particular tissues or organs, such as cardiovascular or nervous systems or physio-pathological situations such as inflammation
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <ul style="list-style-type: none"> 1 • The aim consists in understanding the implication of biochemical mechanisms in human physio-pathology and to realize how molecular and cellular approaches but also integrating physiological aspects, allow us to understand these situations and to identify leads for a possible treatment.
Evaluation methods	<p>Two oral presentations of group work (intermediate and final). Attendance at all presentations is mandatory. Group participation is also taken into account.</p>
Teaching methods	Flipped classroom, coaching, group work
Content	<p>The teaching aims at analyzing one human physio-pathological situation from a biochemical viewpoint, as well as nutritional, pharmacological or toxicological implications.</p> <p>The aim will consist in learning to understand the implication of biochemical mechanisms in human physio-pathology, and to realize how molecular and cellular approaches, but taking into account physiological aspects, allow to understand these situations, as well as to elaborate trends to possible treatments or better prevention.</p> <p>Every year, one particular physio-pathological situation, or a few ones but interconnected, will be studied. An introduction to the topic will be done; then, some recent research articles related to the topic will be analyzed by the students.</p> <p>The theme changes each year and is communicated during the first course.</p> <p>For example, in recent years, the topics covered have been microbiota, lipids and sterols, glucose and the endocrine system.</p> <p>English is the principal language.</p>
Inline resources	Moodle
Other infos	<p>Prerequisite :</p> <p>Knowledge in biochemistry and physiology.</p>
Faculty or entity in charge	BIOL

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Biochemistry and Molecular and Cell Biology	BBMC2M	5		
Master [60] in Biology	BIOL2M1	5		
Master [120] in Chemistry and Bioindustries	BIRC2M	5		