wphar1300

2021

Pharmacology Part 1

3.00 credits	30.0 h + 7.5 h	Q1

Teacher(s)	Hermans Emmanuel ;Mingeot Marie-Paule ;
Language :	French
Place of the course	Bruxelles Woluwe
Prerequisites	MD1005 General Biology (9 credits) or equivalent MD1006 General Cytology and Histology (5 credits) or equivalent A basic cell physiology course. *The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.*
Main themes	The following chapters are covered: Pharmacodynamics: theoretical concepts and experimental approaches. Qualitative and quantitative characterization of the interaction of drugs with their molecular targets in order to predict their biological effects on simple models or on the whole organism. Systematic study of the main inter and intracellular chemical signaling pathways governing the functioning of the organism. Systematic study of pharmacological targets (receptors, ion channels, enzymes). Basic notions of general pharmacotherapy: main principles of the study of drug activity and study of the risks related to pharmacological treatments.
Learning outcomes	**At the end of this learning unit, the student is able to :** 1 At the end of this teaching entity, the student will have acquired knowledge of the basic concepts in pharmacology: 1. He will be able to define the main targets of the drugs and understand the methods used to determine their activity. 2. He will have an integrated vision of intracellular signaling pathways. 3. He will be able to understand the multiplicity of targets used or usable in pharmacology. 4. He will dispose of general notions concerning the use of medicinal products in human medicine and in particular the principle of studies leading to their validation. 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'.
Evaluation methods	Oral exam with written preparation. The teachers involved in the courses are both present at the exam and combine their notes (simple arithmetic mean). During the first presentation of the exam, the mark related to the practical work (teaching lab) is integrated into the exam mark and represents 10% of the final mark.
Teaching methods	Teaching is based on lectures (total of 30 hours) and practical work in laboratory (7.5 hours)
Content	- General pharmacodynamics: mechanisms of action of drugs; Quantitative study of the relationship between receptor binding and pharmacological response; Basic concepts on the identification, classification and regulation of receptors. - General pharmacotherapy: therapeutic index; Tolerance and drug dependence; side effects; Drugs interactions; Clinical evaluation of drugs: placebo effect, clinical trials. - Systematic description of pharmacological targets at the molecular level and their implications in various pathophysiological processes The teaching is essentially based on the exploration of a large number of notions specific to pharmacology. Beyond a descriptive theoretical course, the notions are developed through concrete examples.
Bibliography	Le support : l'essentiel des documents présentés aux cours sont accessibles sur Internet via la plateforme Moodle accessible aux membres de la communauté universitaire.
Other infos	Prerequisites: MD1005 General biology (9 credits) or equivalent MD1006 General cytology and histology (5 credits) or equivalent. A basic cell physiology course is also required as prerequisite. Support: most of the documents presented in the courses are accessible on the Internet via the UCL Moodle site. Participation in practical work is compulsory and essential to validate the teaching unit. Any unjustified absence entails a penalty for the exam which may go as far as the cancellation of the examination mark for the year of study considered (0/20). In case of absence, the teacher can propose to the jury to oppose registration for the examination relating to the course in accordance with article 72 of the RGEE
Faculty or entity in charge	SBIM

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Biomedicine	SBIM1BA	3	WMD1120 AND WMD1006 AND WSBIM1001 AND WSBIM1201T AND WSBIM1201P	🔍