

Faculty of Medicine



FARM1232 General Pharmacology

[15h+7.5h exercises] 2 credits

Teacher(s): Emmanuel Hermans
Language: French
Level: First cycle

Aims

By the end of this course, the students will possess a general knowledge of fundamental concepts in pharmacodynamics and pharmacotherapy : 1. Students will have an overview of the principal molecular targets of drugs, and will understand the methods used to evaluate the activity of drugs. 2. They will understand the fundamental aspects of the interactions between drugs and their targets 3. They will have an overview of the general rules concerning the use of drugs in human medicine. The aim of the course is to provide sufficient background for further study of all classes of drugs used in pharmacology (courses in Special Pharmacology and Pharmacotherapy)

Main themes

Pharmacodynamics : theoretical aspects and experimental approaches, including quantitative assessment of drug activity. Comprehensive overview of pharmacological targets (receptors, ionic channels, enzymes).
 Basic concepts in pharmacotherapy : main principles governing the study of drug action and uses as well as the risks related to pharmacological treatments.

Content and teaching methods

General Pharmacology : mechanisms of action of drugs; quantitative study of drug-receptor interaction and related responses (potency and efficacy of drugs). Basic concepts of identification, classification and regulation of pharmacological targets.
 General Pharmacotherapy: therapeutic index; tolerance and pharmaco-dependance; secondary and unwanted effects of drugs; drug interactions; clinical evaluation of drugs: placebo effect, clinical studies.
 General description of pharmacological targets at the molecular level and their implication in diverse physiopathological processes.
 The course explores a large number of concepts specific to pharmacology. Beyond a theoretical description, several examples of drugs and their actions are explained.

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

Requirements :

MD1005 Biologie générale (9 credits) or equivalent
 MD1006 Cytologie et histologie générales (5 credits) or equivalent
 A course of Cellular Physiology

The course includes lectures (total of 15 h) and practical activities (7,5h)

Support : All documents related to the lectures are available for students as paper copies (these documents are also accessible on Internet via the website of the university - iCampus).

Examination : Written exam with open questions (questions requiring extended explanation)

Other credits in programs

FARM12BA	Deuxième année de bachelier en sciences pharmaceutiques	(2 credits)	Mandatory
SBIM32DS/TE	Deuxième année du diplôme d'études spécialisées en sciences biomédicales (toxicologie expérimentale)	(2 credits)	Mandatory