

Faculty of Medicine



FARM2226 Pharmaceutical chemistry

[30h+15h exercises] 4 credits

This course is taught in the 1st semester

Teacher(s): Paul Depovere, Didier Lambert (coord.)
Language: French
Level: Second cycle

Aims

The course of pharmaceutical chemistry aims at giving the student the capacity to understand the reasonings leading to the design and the development of a drug. At the end of the course, the student must be able, looking at the structure, to reason on 1/ the pharmacology of a drug (both the pharmacodynamic and pharmacokinetic aspects) 2/ chemical access to this drug molecule (synthesis, purification, pharmaceutical technology).

The seminar (FARM 2226S) is a work in small group with an oral presentation where the student must demonstrate their capacity to integrate the reasonings at the basis of the development of a structure-activity relationship centered on a lead compound.

Main themes

The two professors have chosen two different approaches for the contents of the pharmaceutical chemistry course. The horizontal approach studies the ensemble of the proteins of a given physiological system and on their chemical aspects the pharmacological tools and the drugs deriving. The vertical approach studies the chemical variants of given targets : calcium antagonists, type5 phosphodiesterase inhibitors, AT1, angiotensine II, 5-HT1 antagonists and farnesyl transferase inhibitors.

Content and teaching methods

In its horizontal part, the histamine system is studied from the biosynthesis till the intervention of the xenobiotics constituting the activation and inactivation systems of histamine. Students learn to deduce notions from field examples: active conformation, rigid analogs, prodrugs, bioisosters, racemic mixtures.

The seminar (FARM 2226S) consists of a team work of 3 - 5 students where they apply the notions of the course to the critical comment of a literature article.

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

Notions of organic chemistry. The course FARM2124 must have been followed. For the seminar, notions of English is absolutely mandatory.

Written exam with open questions for FARM2226? Oral presentation for FARM2226S (in English coupled with the course of English in FARM22).

Course notes voluntarily scarce to stimulate the interactivity in the horizontal part, more classical notes for the experimental part.

Other credits in programs

FARM22	Deuxième année du grade de pharmacien	(4 credits)	Mandatory
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