



# Faculté de médecine

## MD

FARM1130 Introduction botanique à la pharmacognosie: A)compléments de morphologie  
B)systématique

[27.5h+25h exercises] 5 credits

This course is taught in the 1st and 2nd semester

**Teacher(s):** Jean-Pierre Auquière, Joëlle Leclercq  
**Language:** french  
**Level:** 1st cycle course

### Aims

At the end of this course, the student should have enough knowledge to recognize and identify pharmaceutically important natural organisms (macroscopic fungi, medicinal and toxic plants) to

- prevent and recognize intoxications by these organisms and determine their causes
- verify the identity of the plant drugs he/she will have to deliver or expertise during his professional life
- follow the pharmacognosy courses and understand the notions of biosynthesis and chemotaxonomy

Furthermore, the student should have knowledge in plant biotechnology and on the major classes of active plant molecules

### Main themes

The main themes of the course are:

- notions of mycology of macroscopic fungi
- morphology of the different plant organs and tissues
- general aspects of the main classes of active natural compounds
- systematic study of the main families with toxic or medicinal plants
- description of the different types of flowers
- techniques for medicinal plant improvements, optimisation of yields
- notions of plant biotechnology

### Content and teaching methods

- Identification of macroscopic fungi
- The different plant tissues and organs with an emphasis on the characteristics allowing identification of plant drugs
- The main classes of natural active molecules (general structures and main uses): primary and secondary metabolites (polyphenols, terpenic derivatives and alkaloids)
- Intrinsic and extrinsic methods to ameliorate medicinal plants
- Basic information on plant biotechnologies (OGM, in vitro cell and tissue cultures, phytohormones, regeneration from in vitro cultures)
- Notions of systematic and description of the main families containing medicinal or toxic plants (morphology, types of active molecules, main uses)

This last part is illustrated by practical works where students will learn to use a flora and constitute a herbal collection.

Seminaries will also be organised to show to students in small groups how to identify macroscopic fungi. A medicinal plant garden (400 species) is available. Visits may be organised.

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

Pre-requisite: organic chemistry, plant biology

An exam is organised on both the theoretical and practical aspects:

- practical part: correction of the plant collection and identification of plants with a flora

- theoretical part: to succeed, the student should be able to integrate the different notions to have a global view on the vegetable world. This needs memory, but also synthetic capabilities

Supports: slides, notes and "the Belgian flora"

Medicinal plant garden

**Other credits in programs**

<b>FARM12</b>	Deuxième candidature en sciences pharmaceutiques	(5 credits)	Mandatory
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