UCLouvain

wfarm1383

2026

Pharmaceutical genetics and biotechnology

3.00 credits	36.0 h	Q2

Teacher(s)	Bindels Laure ;Collet Jean-François ;Demoulin Jean Baptiste (coordinator) ;Lucas Sophie ;
Language :	French
Place of the course	Bruxelles Woluwe
Prerequisites	*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	Discussed subjects will be: The use of biotechnology in the pharmaceutical world. In particular, the exploitation of molecular biology tools in (1) the development and production of drugs such as coagulation factors, growth factors, insulins, monoclonal antibodies and vaccines. (2) The development of useful models for the identification and pharmacodynamic characterization of new drugs (eg recombinant expression of protein targets, transgenic mice, etc.) (3) Human genetic studies aimed at developing new targeted drugs, understanding inter-individual variations in response to treatments, and adapting treatment to individual patients
Learning outcomes	**At the end of this learning unit, the student is able to :** 1 At the end of this teaching unit, the student will have acquired a good knowledge of the biotechnologies used in the field of pharmaceutical sciences. She/He will be able to understand the origin of some complex medicines (e.g. generated by bacteria, yeasts, or mammalian cells). She/He will also consider the importance of genetically modified organisms used as models in pharmacology experiments. She/He will also be able to understand the importance of identifying genetic variations between individuals that explain differences in therapeutic responses. This teaching unit will make possible for the student to move forward in the understanding of pharmacogenomics applied to medicines as well as how the different pharmacological classes have been developed and work.
Faculty or entity in charge	FARM