UCL Université catholique de Louvain

WFARM1382

2014-2015

Molecular genetics and drugs

2.0 credits	30.0 h	1q

Teacher(s) :	Octave Jean-Noël (coordinator) ; De Plaen Etienne ;
Language :	Français
Place of the course	Bruxelles Woluwe
Main themes :	Cloning and expression in prokaryotic and eukaryotic cells. Genetic engineering and production of proteins that are useful in biomedical and pharmaceutical sciences. Utilization of DNA polymorphisms as diagnostic tools. Transgenic animals. DNA modifications in hereditary diseases. Gene therapy.
Aims :	The objectives are to learn the approaches of molecular biology, which allow the analysis of DNA and RNA to develop both diagnostic tools as well as cellular and animal models needed in biomedical and pharmaceutical sciences. *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".*
Content :	Description and utilization of different cloning and expression vectors in procaryotic cells. Construction and screening of genomic DNA libraries. Analysis of the DNA molecule : Detection of different polymorphisms. Construction and screening of cDNA libraries. Cloning and expression of cDNA in different cell types. Overexpression and knock out of genes in transgenic animals. Examples of gene therapy.
Other infos :	Assessment: By written exam. Support: Notes and Power Point presentations provided by the lecturers.
Cycle and year of study :	> Bachelor in Biomedicine > Preparatory year for Master in Biomedicine > Bachelor in Pharmacy > Advanced Master in Clinical Biology
Faculty or entity in charge:	FARM