UCLouvain

wsbim1302

2023

Molecular Virology

3.00 credits	25.0 h	Q1

Teacher(s)	Michiels Thomas ;
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	General structure, replication cycles, and classification of viruses; antiviral agents and vaccination; Reverse genetics and use of viruses as vectors. Selected viruses will be taken as exemples to illustrate the diversity of host-virus interactions and the outcome thereof (latency, cellular transformation, oncogenesis, antigenic variation and escape of immune responses, AIDS...).
Learning outcomes	**At the end of this learning unit, the student is able to :** 1 The lectures present basic concepts on structure and function of animal viruses. It outlines the relationship between the basic replication cycle of the virus and the outcome of the infection for the host. It aims at giving the student the ability to use basic knowledge of viral life cycles as a tool to understand the techniques that are used to detect viruses, develop antiviral compounds.
Evaluation methods	written examination combining (short answer) open and multiple choice questions.
Teaching methods	classes and discussions
Content	Historics of viruses discovery, characterization and classification. Structure and replication cycle of animal viruses (DNA viruses, RNA viruses and retroviruses). Host-virus interaction (cellular transformation, latency, antigenic variation, cancer, oncogenes, AIDS). Vaccination and antiviral agents. Reverse genetics and use of viruses. Non-conventional agents.
Inline resources	web site of "initiation to Virology" (in french): www.virologie-uclouvain.be files with the illustration slides posted on Moodle
Other infos	necessary bases: basic biochemistry, molecular and cellular biology: nature and function of nucleic acids and proteins; gene expression, protein synthesis, modification and targeting in eucaryotic cells; organization and function of the eucaryotic cell. Assessment: By written (or oral) exam. The students will be examined on their knowledge of the subject, and on their capacity to use this knowledge to solve problems
Faculty or entity in charge	SBIM

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Biomedicine	SBIM1BA	3	WSBIM1227 AND WFARM1282	🔍