

2 credits

30.0 h

Q1

Language :	French
Place of the course	Bruxelles Woluwe
Prerequisites	<i>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.</i>
Main themes	A. To discuss the basic concepts of regulatory toxicology. The risk assessment procedure is discussed by using both in vitro and in vivo methods. The mechanisms of toxicity are discussed by starting from the formation of reactive intermediates (free radicals and electrophiles), followed by their interaction with biomolecules (lipid peroxidation, protein and nucleic acid adducts, mutation and cancer), loss of cell homeostasis (hypoxia, oxidative stress, etc), the activity of cell defence systems (superoxide dismutase, catalase, vitamin E, etc), and finally cell death (necrosis and apoptosis). B. 1. Definitions of various polymorphisms (SNP, STRP, CNP). 2. Other reasons for interindividual variability (expression: promoters, methylation, acetylation, LCRs,'). 3. Differences between germline, post-zygotic and somatic variability. 4. Techniques to detect genetic variations and expression differences. 5. Importance of variability for development, disorders and therapeutic response. 6. Evolution / future : personalized medicine.
Aims	<i>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".</i>
Faculty or entity in charge	FARM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Additionnal module in Biomedical Sciences	WSBIM100P	2		