

Title of UE : (teaching unit)		
Pharmacological approaches for the study of life		
Volume of time	8hCM et 18hTD et 4hTP No distance learning	Semester : 7
Number of ECTS (European Credit Transfer System)	3 ECTS	
Teaching team	Referent : Cedric DRAY (cedric.dray@inserm.fr) Cedric Dray , Philippe Valet, Bruno Guiard, Valerie Planat, Nicolas Cenac, Olivier Joffre, Frederique Fallone	
UE Objective:	The aim of this course is to place innovative pharmacological tools for the study of molecular and cellular mechanisms associated with pathological dysfunctions in the context of the various master's courses.	
Content of the courses « UE » :	80 students (2 groups of students including 1 in English) Study of activation/inhibition of molecular targets, drug-design, pharmacological regulation of cellular targets, new pharmacological tools for the exploration and control of living organisms (lipids, miRNA, antibodies, DNA...)	
(TD =>Training courses)	CM1 : Introduction : the notion of ph tools. CM2: Monoclonal antibodies "drugs CM3: Transporters and Ionic Channels CM4: Pharmacological targets in antitumor therapy TD1: Ligand/Receptor Interaction: Tools TD2: Dimerization, receptor-associated proteins TD3: Reverse agonists, constitutively active receptors TD4: Transporters and enzymes: introduction to translational research TD5: From target validation to treatment in cancer pharmacology: the example of the EGF receptor TD6: Membrane Receptor and Ligand-Directed Signaling TD7: Pharmacological regulation of receptors TD8: Gene therapy: the use of viruses as pharmacological agents TD9: Lipid pharmacological "tools	
(TP=>Practical courses)	TP: Ligand/receptor binding	
Assessments	100% CT	
Required level	Basics of cellular and molecular biology (L3 level)	
Keywords	Pharmacology/Ligand/Receptology/Drugs	
FTLV (O/N)	None	
Skills	- Master the concepts of ligand/receptor binding -Molecular biology -Cellular biology -Physiology of pathologies	
Skills block	-Physiology/Cell Biology/Biochemistry	