UCLouvain

lbio1349

2021

Neurobiology

4.00 credits	30.0 h + 20.0 h	Q2

Teacher(s)	Clotman Frédéric (compensates Knoops Bernard) ;Gofflot Françoise ;Gofflot Françoise (compensates Knoops Bernard) ;Knoops Bernard ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	It is advisable to have a good prior knowledge of the topics covered by the courses LBIO1234; LBIO1235; LBIO236.
Main themes	The course covers several aspects of the development of the nervous system and the complex brain functions of mammals. The course also covers the study of neurological disorders, neurodegenerative pathologies and the regenerative mechanisms of the nervous system. The course begins with an in-depth study of the development of the nervous system in mammals, including rodents and humans. Certain neurodevelopmental disorders will be discussed. Complex brain functions involving associative cortical areas, speech production and comprehension, control of biological rhythms, emotions and memory will also be studied. Finally, various major neurodegenerative pathologies including Parkinson's disease, Alzheimer's disease, amyotrophic lateral sclerosis will be addressed as well as regeneration mechanisms involving stem cells and axonal regeneration in the nervous system of adult mammals.
Learning outcomes	**At the end of this learning unit, the student is able to :** • understand and describe the fundamental processes underlying the development of the mammalian central nervous system ; • identify and describe the molecular actors involved and their signalling pathways • demonstrate an understanding of the general principles of complex brain functions studied in the course ; • understand and describe the characteristics and molecular mechanisms involved in the different pathologies studied; • understand, describe and discuss the neurodegenerative mechanisms and regenerative processes of the adult mammalian nervous system. • analyse and comment on an article from the recent scientific literature related to the topics covered during the ex cathedra course, seminars and reverse classes.
Bibliography	Ouvrages de référence : 1. Neurosciences (Purves *et aL*, éditions de Boeck). 2. Psychobiologie (Breedlove et al., éditions de Boeck) Articles de la littérature récente
Faculty or entity in charge	BIOL

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Additionnal module in Biology	APPBIOL	4		🔍