UCL Faculté des sciences

SC

BIOL2113 Histologie et biologie cellulaire animales

[30h+18h exercises] 5 credits

This course is taught in the 1st semester

Teacher(s): Bernard Knoops (coord.), Philippe van den Bosch Sanchez de Aguilar
Language: french
Level: 2nd cycle course

Aims

Establish the morphological and functional bases of general histology and of the main tissues of animals, emphasis on Mammals.

Main themes

1. Epitheliums: characteristics and general properties of the epithelial cell. Epithelial differentiation and structure-function relations. Epitheliums and their regional differentiation (tegument, respiratory tract, intestine). Glands and their secretion functions (exocrine glands: salivary glands, liver, pancreas). The exchanges through the epitheliums (endothelium, kidney epithelium). Dynamics and proliferation of epitheliums. 2. Connective tissues: description of the extracellular matrix components and of the cellular microenvironment. Differentiation and origin of connective tissues. The adipose tissue. Cartilage and bone tissue, the chondro-and ostoeogenesis. 3. Hematopoietic tissues and the blood: formation, differentiation, origin of blood cells; structure and function of blood cells; introduction to immune reaction. 4. Muscle tissue: smooth muscle, skeletal muscle and cardiac muscle; cellular aspects of contraction and regulation mechanisms. 5. The nervous tissue: the neuron, synapse and neuronal network; transport of information, glial cells and their function in protecting and cooperating with neurons. Assisted work: examination of tissues from different organs; introduction to macroscopic anatomy.

Other credits in programs

BIOL21/A	Première licence en sciences biologiques (Biologie moléculaire, cellulaire et humaine)	(5 credits)	Mandatory
BIOL21/B	Première licence en sciences biologiques (Biologie des organismes et des populations)	(5 credits)	Mandatory
VETE12	Deuxième candidature en médecine vétérinaire	(5 credits)	Mandatory