BIOL2121 Physiologie générale

[60h+30h exercises] 5 credits

This course is taught in the 1st semester

Teacher(s): Patrick Gilon, Jean-François Rees
Language: French
Level: Second cycle

Aims

To describe the common fundamental mecanisms of energy, substance and information transfer through the living organisms.

Main themes

1. Description of the interior environment and of mecanisms put into place to maintain its composition despite the variations of parameters of the exterior environment. A) composition of interior environment B) ionic and hydric regulation: aquatic organisms, terrestrial organisms. C) Effects of atmospheric pressure: on organisms, isolated tissues, on proteins, mecanisms of action on molecular pressure D) Effects of temperature : Q10 and physiological process E) Effects of light: UV rays and the biosphere, biological effects of light, photosensibility and photodynamism, photoperiodism and biological rhytms. 2. Exchanges of substance and transport mecanisms: transport of neutral molecules by diffusion, water movements, eletrolyte diffusion, assisted transports. 3. The transport of information: membrane potential, excitability, conduction of action potentials, SYNAPTIC transmission. 4. Motility: the filamentous structures of cells, elementary movements, cardiac muscles, XX unitary and multiunitary muscles, the tonic muscles of Molluscs.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites: general biology, chemistry, physics, mathematics, knowledge of french.
Evaluation: oral examination, January, June and September sessions.
Support: syllabus

Programmes in which this activity is taught

VETE1 Candidature en médecine vétérinaire