

Physiology Pharmacology

Physiology 1 : Mechanisms of homeostasis

IDENTIFICATION

CODE : BS-3-S1-EC-COPHYS1
ECTS : 2.0

HOURS

Lectures : 24.0 h
Seminars : 0.0 h
Laboratory : 0.0 h
Project : 0.0 h
Teacher-student
contact : 24.0 h
Personal work : 26.0 h
Total : 50.0 h

ASSESSMENT METHOD

TEACHING AIDS

duplicate course material

TEACHING LANGUAGE

French

CONTACT

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AIMS

Gain basic knowledge of the different levels of organisation in a living organism, grasp its structural and thermodynamic complexity and, using a cybernetic approach, study the mechanisms responsible for the homeostasis of body fluids.
Theoretical and practical initiation to animal experimentation.

CONTENT

Knowledge of the organizational levels of a living organism and the mechanisms responsible for homeostasis of the inner environment.
- Liquid compartments
- Membrane water and solute transport (passive, active)
- Ion exchange and membrane potential
- Acido-basic regulation
- Blood cells and their functions
- Renal regulation of the inner environment

BIBLIOGRAPHY

Physiologie des régulations - E. Schoffeniels and G. Mooner - Masson - 1993
Review of Medical Physiology. 20th Edition - W.F. Ganong - Mc Graw-Hill Professional Publishing - 2001
Introduction à la physiologie - Cybernétique et régulations - Bernard Calvino - Belin - 2003
The laboratory mouse - Hedrich H, Bullock GR - Academic press - 2004
The laboratory rat - Krinke GJ, Bullock GR - Academic press - 2000
Current techniques in small animal surgery - Bojrab MJ, Ellison GW, Slocum B - Lippincott, Williams et Wilkins - 1997
Experimental and surgical techniques in the rat - Waynforth HB, Flecknell PA - Academic press - 1992
Laboratory animal anesthesia: a practical introduction for research workers and technicians - Flecknell PA - Academic press - 1996

PRE-REQUISITE

Bac + 2 level