PHYSIOLOGIE HUMAINE ET BIOTECHNOLOGIES

HUMAN PHYSIOLOGY AND BIOTECHNOLOGY

Lecturers: Emmanuelle LAURENCEAU

| Lecturers : 16.0 | TC : 0.0 | PW : 4.0 | Autonomy : 0.0 | Study : 8.0 | Project : 0.0 | Language : FR

Objectives

The objective is to upgrade the basic knowledge in physiology and to enable understanding of the mechanisms of communication and regulation of the organism. Integration between the different functions will be tackled from concrete examples for biomedical applications based on the study of systems such as cardiovascular and immune systems. A second part will allow understanding the function of a living cell in its natural environment and to apprehend the potentialities of the cells and the biomolecules which compose them in the sectors of health. Emphasis will be placed on the link between structure, environment and ability to fulfill a biological function. The course will be illustrated by developments in molecular biology.

Keywords : cells, molecular biology, cardio-vascular and immune systems, biomedical applications

Programme

Organization of the living cell
Organization of the human body: Cardiovascular, immune systems
Basic biological mechanisms
Cells in their environment
Lab: Analysis of grouwth cell
BE: Pharmacology
BE: Analysis of cardiac function by imaging

Learning outcomes

- Know the basics in cellular and molecular biology Understanding the functioning of the human body and the structure-biological function relationships Understanding health sector issues Apply knowledge to problem solving

Independent study

Objectifs : Preparation of the basic knowledge required for each course

Méhodes : Provision of a course handout

Core texts

Alberts Bruce M. (Collab.) Johnson Alexander (Collab.) Lewis Julian (Collab.), *BIOLOGIE MOLÉCULAIRE DE LA CELLULE*, Flammarion Médecine-Sciences, 2004
Étienne Jacqueline *BIOCHIMIE GÉNÉTIQUE, BIOLOGIE MOLÉCULAIRE*, Masson, 2006
Silverthorn Dee Unglaub*PHYSIOLOGIE HUMAINE*, Pearson education, 2007

Assessment

Evaluation of practical work = know-how
BE evaluation = methodology
Final exam = knowing