

Màj 09/06/2022

## UE 2.1. Current concepts in Biology and Health Sciences

6 ECTS

### Teaching unit shared by the following tracks:

- Cellular, Integrative and Translational Neurosciences
- Diabetes and cardiovascular diseases
- Fundamental and clinical oncology, towards precision medicine
- Immunity, Inflammation et Infection

The purpose of this fundamental disciplinary teaching unit is to provide knowledge enabling students to approach later more specialized courses in the fields of immunity, inflammation and infection. Several teaching subunits (JT) are provided. Each is organized during one day around a specific topic. Student choose six subunits related to their research project and / or essential in their specialization area. During the JT, theoretical concepts are presented through mini-conferences by experts in the field. Teaching through flipping classrooms methods are also used with presentations by students of recent research related to the topic of the day.

### Block of Skills and Knowledge - BCC2: Know the recent concepts in Biology and Health Science in a specialization area

#### Skills acquired (direct / indirect):

- Contribute to a research activity in the field of Biology and Health Science (SB1): by identifying the challenges of research in Biology and Health Sciences (calls for projects, scientific policy, health economics, etc.); by basing hypotheses on the most recent concepts in a specific field of research.
- Communicate scientific data (SB5): by synthesizing data from both the scientific literature and experimentally self-acquired; by presenting and discussing concepts or results from various supports (oral presentation, poster, written report, etc.);

#### Elective teaching: 13 teaching subunits (6 choices from 13)

- EC1: In vivo study of gene function and regulation.
- EC2: Chromatin and epigenetic regulation.
- EC3: Membrane receptors and associated signaling pathways.
- EC4: Nuclear receptors: structure, mechanisms, pathophysiology and study methods.
- EC5: Intra- and inter-cellular trafficking
- EC6: The multiple forms of cell death: pathophysiological implications.
- EC7: Mitochondria and pathophysiology
- EC8: Regulation of food intake and energy homeostasis by the central nervous system.
- EC9: Immune responses: dynamics and molecular bases.
- EC10: Human pathophysiology and ion channels.
- EC11: Glycopathology, from rare genetic diseases to acquired diseases linked to sugars.
- EC12: Study of behavior: from human to animal.
- EC13: Introduction to clinical research.

**Test:** continuous assessment