Màj 10/06/2022

UE 1.3. Disciplinaire thématique **12 ECTS**

EC2: Metabolic plasticity in health and diseases

Équipe pédagogique : Delphine Eberlé, Didier Vieau, Tony Lefebvre, Joel Haas

Contact : delphine.eberle@univ-lille.fr

Résumé

This teaching unit offers unique training for studying metabolic adaptations that occur in various chronic diseases (Obesity, Type 2 diabetes, Cancer, Neurodegenerative diseases) at the molecular, cellular and tissular levels. Topics will be highly interdisciplinary to highlight the importance of using complementary approaches to understand complex diseases. This unit also offers the possibility to add a metabolic dimension to the pathophysiology of tumoral, inflammatory and neurodegenerative diseases.

Objectifs pédagogiques :

This teaching unit will allow students to discuss the impact of metabolic adaptations in diverse physiological and pathophysiological conditions, and to integrate these concepts in their own research topics.

Bloc de Compétences et de Connaissances-BCC 1 : Connaitre les concepts de base en Biologie Santé

Compétences acquises (directes/indirectes) :
Cet enseignement contribue à fournir les compétences pour contribuer à une activité de recherche en Biologie-Santé (BC1), en préparant les étudiants à :

- cerner les enjeux de la recherche en Biologie-Santé ;
- organiser une veille bibliographique de la littérature scientifique internationale ;
- fonder des hypothèses sur les concepts les plus récents en recherche Biologie-Santé.

- Fundamental knowledge on metabolic pathways and actors and their relevance in many chronic diseases
- Ability to analyze, interpret, synthesize and present scientific data
- Practice of scientific English

Prérequis :
None

Program in brief:
- Adipose tissue plasticity: from white adipose tissue to brown adipose tissue, and in between
- Brain metabolism under physiologic and pathologic conditions (neurodegenerative diseases, aging)
- Meta-inflammation: friends or foe?
- Metabolic reprogramming in cancer
- Developmental programming of metabolic health and diseases
- Targeting metabolic plasticity for therapeutic benefit

Contrôle des connaissances : contrôle continu 30% - terminal écrit 70%