

UE Synaptic Plasticity of the adult nervous system



ECTS
6 credits



Component
UFR Chimie-
Biologie

- > **Teaching language(s):** English
- > **Open to exchange students:** Yes
- > **Code d'export Apogée:** YAX9BI14

Presentation

Description

The 3h lectures are given by specialists of the field working in Grenoble or in foreign universities. They will deal with the following subjects:

- Principle of electrophysiology
- Principle of calcium and voltage membrane potential imaging
- The use of transgenic mice and bi-photon microscopy to monitor the role of glial cells in the brain.
- Ischemia: Glutamate receptors and ischemia
- Of Microtubules and Mitochondria
- Stem cells in the CNS
- Alzheimer's disease: from the gene down to the synapse
- Huntington and axonal transport
- Htt links Neurodegeneration to CNS development

10h will be dedicated to presentations of scientific articles by students.

Each year, a full day congress will be organized on a particular field, coordinated with other M2 NN modules.

Course parts

UE Synaptic Plasticity of the adult nervous system- CM	Lectures (CM)	27h
UE Synaptic Plasticity of the adult nervous system - TD	Tutorials (TD)	9h

Period : Semester 9

Skills

After this module, the students should be able to:

1. Recapitulate the basic cellular and molecular mechanisms underlying learning and memory as well as those compromised in neurodegenerative diseases.
2. Apprehend the state-of-the art methods allowing studies of synaptic plasticity both *in vitro* and *in vivo*.
3. Explain experimental strategies used in a scientific study, analyze and discuss the results.

Useful info

Contacts

Program director

Remy Sadoul

✉ Remy.sadoul@univ-grenoble-alpes.fr

Place

› Grenoble

Campus

› Grenoble - University campus