

Faculty of Medicine



FARM3333 Molecular biology applied to pharmacology

[15h]

Teacher(s): Jean-Noël Octave
Language: French
Level: Third cycle

Aims

The objectives are to learn the approaches of molecular biology, which allow to study the mechanisms of action of complex membranous proteins like ionic channels or receptors, and to identify the sites of interaction of pharmacological molecules with their receptor.

Main themes

Molecular cloning of different ion channels and neuroreceptors are presented. Utilization of molecular biology to construct cellular and transgenic models

Content and teaching methods

Cloning and expression of different neuroreceptors are presented. Their molecular characterization allows analyzing the interaction between receptors and ligands. Cellular expression of cloned receptors provides indispensable tools to study signal transduction and to develop new molecules with original pharmacological profiles. The construction of transgenic animals is also very useful in pharmacological studies.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Assessment: In the first part of the lectures, the tools of molecular biology needed for the construction of cellular and animal models are presented. Each student has then to analyze a very recent paper in the context of the lectures, and to present this paper for all the students.

Support: The Power Point presentation corresponding to the first part of the lectures