Genetics of reproduction and sexual differentiation

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Effectives: <20
Language: French/Slides in english
Prerequisites: no

Where?
university Diiderot

When? December 5-9

Evalutation:
two-hours exam at the end of the week

Number ECTS: 3

Total numbers of hours:
6 hours /days/5 days
Teaching format:
conferences/2 seminars

Teaching objectives

Lead the students to master the major steps of gonadal sex determination and differentiation and its genetic or environmental determinism along with the function of emblematic genes such as FOXL2, SOX9 and RSPO1 genes. The impact of the perturbation of gonadal function leading to human infertility is also touched upon.

Teaching outline

Taught as a series of lectures and two seminars dealing with the major steps in sexual differentiation
The cellular basis of gonadogenesis
The role of FOXL2, SOX9 and RSPO1 genes
Aneuploidy and ovogenesis
Genetic determinism of gonadal differentiation and human infertility
Molecular mechanisms of pituitary differentiation
Sex determination and the environment
Epigenetic determination of sex determination