

INSTITUT PASTEUR COURSE - EDUCATION CENTER

Mouse Genetics

Institut Pasteur, Paris, January 6 - February 11, 2020

This **five-week** intensive laboratory and lecture course covers the analysis of gene function at all levels: the gene and its product, the cell and its interactions, the embryonic tissues and the whole animal.

This course offers a full training program for advanced graduate and PhD students, as well as post graduate biologists, medical doctors and veterinarians willing to work on medical and experimental mammalian genetics.

The themes of the course:

The **theoretical part** of this course deals, in particular, with genetic analysis of mendelian and quantitative traits, phenotypic analysis of genetic variants, early embryo biology, pluripotent stem cells, cellular and molecular mechanisms controlling embryogenesis, models to study oncogenes and tumor suppressor genes, methods to study cell lineage in mouse embryos, genome editing and conditional expression systems for transgenes, optogenetic approaches and the role of small RNAs.

The themes of the practicals:

The **practical part** presents methods and techniques used to derive induced pluripotent stem cells (iPS) from differentiated cells, to study behavioral traits, to analyze gene function in embryonic and adult mutants, to map mendelian traits and to identify QTLs.

Online registration:

www.pasteur.fr/en/mouse-genetics

Co-directors:

Michel Cohen-Tannoudji
Xavier Montagnutelli

Practical information:

Deadline for application: September 15, 2019
Attendees: 20 students
Contact: enseignement@pasteur.fr