

Primary phenotyping of mouse embryos



INFORMATIONS

Training course from PHENOMIN infrastructure

Durée : 3 days

In 2015 :

Reference : SRI16-0402
From November 25th to
November 27th

Lieu : Institut Clinique de la
Souris
Rue Laurent Fries
67404 ILLKIRCH
GRAFFENSTADEN

Frais de participation :

Lunches are free of charge for
the attendees
Code : 250

Renseignements et inscriptions :

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Prospectives attendees

Researchers, engineers, scientists. Need to have the basic knowledge in animal biology to understand mouse development physiology and the biological technics for phenotyping. The training is opened to Non-French speaking people.

Learning objectives

This training is aimed at providing a theoretical and practical background knowledge destined for researchers and engineers that are willing to acquire primary expertise in mouse development. The topics will cover dissection of post implant embryos, histology, whole mount Lac Z staining and confocal imaging of whole embryos.

Content

Jour 1 :

- Lectures: Mouse embryology
Introduction to Mouse embryonic development
Determining the window of lethality of mutant mice in utero
Phenotyping of mouse embryos -

- Workshops

Collection and fixation of mouse embryos and placentas at E10.5 (mid gestation stage)
Whole mount Lac Z staining of E10.5 embryos (Step1)

Jour 2 :

- Lectures : Phenotyping of mouse embryos
- Classical histology (Fixation, embedding, orientation, sectioning and staining), Immunohistochemistry and in situ hybridization
- Imaging technics (HREM, micro CT, OPT)
- High frequency echography to visualize and quantify embryonic development

- Workshops

- Observation of embryos by echography
- Observation of embryos by micro CT, OPT (potentialy)
- Whole mount Lac Z staining of E10.5 embryos (step 2) + Observation
- Collection of mouse embryos at E8.5 (early embryonic stage)
- Collection of mouse fetuses and placentas at E18.5 (just before birth)

Jour 3 :

- Lectures: specific technics in mouse embryology
The in-vitro culture of mouse embryos/ drug testing
Confocal macroscopy: application in embryology

- Workshops

Observation of embryos at the confocal microscope
Visualization of histological sections at different stages of development. Example of abnormalities.

Teaching methods

Lectures in the morning and workshop in the afternoon.

Informations

This training course is an "action d'adaptation et de développement des compétences" (ref. French law). A certificate of attendance is delivered after the course. An evaluation measures the trainees' satisfaction especially on the achievement of learning objectives.

Study Directors

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Pr. Manuel Mark, M.D, PhD

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