

Scientific and technical environment of the training course



Institut de génétique et de biologie moléculaire et cellulaire

<http://www.igbmc.fr>

PHENOMIN

<http://www.phenomin.fr>

COURSE DIRECTORS

Yann HERAULT

Senior researcher
UMR 7104

Olivia WENDLING

Research engineer
UMR 7104

LOCATION

ILLKIRCH (67)

ORGANISATION

3 days

From 08:30 am to 04:30 pm

Training course in English

Mandatory one week quarantine to access animal facilities

From 6 to 8 attendees

Registration required at most 1,5 month before the training

TRAINING FEES

1700 Euros

AT THE END OF THE TRAINING COURSE

Satisfaction survey from trainees

A certificate of training is delivered.

COURSE DATE

Ref. 19 359 : from Tuesday 15/10/19 to Thursday 17/10/19

January	February	March	April
May	June	July	August
Sept.	Oct. 19 359	Nov.	Dec.

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Mouse embryology: practical training course

NEW

OBJECTIVES

- Acquire primary expertise in mouse development
- Be able to design primary phenotyping experiment on mouse embryos
- Learn about all the primary phenotyping analysis on mouse embryos
- Be able to dissect post-implanted embryos
- Be able to determine the window of lethality in utero
- Be able to evaluate embryos viability at neonatal stage
- Increase awareness of relevant technics to image embryos

AUDIENCE

Opened to graduate students (PhD), post-doctoral scientists, researchers, and engineers

Attendees are invited to download and fill out the survey from our web site to adapt the programme to the trainees' expectations.

Pre-requirement: attendees should have the basic knowledge in mouse physiology and should be able to handle mice. Mandatory respect quarantine, meaning no contact with any rodents (rodents and exotic pets included) 3 days before accessing the PHENOMIN-ICS animal facilities. You will receive a form to sign upon your registration to the training.

TRAINING PROGRAMME

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

Courses (In the mornings)

- Mouse embryology: introduction to mouse embryonic development, determining the window of lethality of mutant mice *in utero*
- Phenotyping of mouse embryos: classical histology (fixation, embedding, orientation, sectioning and staining), immunohistochemistry and *in situ* hybridization, imaging technics (HREM, MicroCT, OPT), high frequency echography to visualize and quantify embryonic development
- Specific technics in mouse embryology: the in-vitro culture of mouse embryos / drug testing, confocal macroscopy - applications in embryology

Workshops (In the afternoons)

- Collection and fixation of mouse embryos and placentas at E10.5 (mid gestation stage)
- Observation of Whole mount Lac Z E10.5 stained embryos (Step1)
- Observation of embryos by echography
- Observation of embryos by HREM, OPT
- Collection of mouse embryos at E8.5 (early embryonic stage)
- Collection of mouse fetuses and placentas at E18.5 (just before birth)
- Observation of embryos at the confocal macroscopy
- Visualization of histological sections at different stages of development. Example of abnormalities

SPEAKERS

O. Wending, H. Jacobs, G. Bou About (PhDs, managers of the Phenotyping platforms at PHENOMIN-ICS), Y. Lutz (PhD, manager of the Imaging platforms at IGBMC), M. Teletin (PhD, researcher at IGBMC)

This training is organized by PHENOMIN, the French National Infrastructure in Mouse Phenogenomics, in collaboration with CELPHEDIA Networks and Infrastructure.