



Czech Centre for Phenogenomics

ANATOMICAL BASES OF MOUSE MULTIMODAL IMAGING TRAINING COURSE PROGRAMME – JANUARY 16-20, 2017

The aim of this training course is to capacitate participants to localize and interpret the basic anatomical details using imaging technologies.

TUTORS

Jesús Ruberte París Full Professor of Veterinary Anatomy
Head of Mouse Imaging Platform
Center for Animal Biotechnology and Gene Therapy
Universitat Autònoma de Barcelona

Marc Navarro Beltrán Professor of Veterinary Anatomy
Mouse Imaging Platform
Center for Animal Biotechnology and Gene Therapy
Universitat Autònoma de Barcelona

Lectures will be followed by practical sessions in which participants will visualize isolated bones and dissect specific organs of the mouse body.

LOCATION **Czech Centre for Phenogenomics / BIOCEV**
Prumyslova 595
252 50 Vestec
Czech Republic
Europe

TUTION FEE **€ 1500**

The course fee includes lunches & refreshments during course and two joint evening meals. Accommodation and transport costs are not included in the fee and has to be covered by participants on their own.

HOW TO APPLY?

Applications for this course should include:

- A letter of motivation
- Short CV (1 page)
- A reference letter

Applications should be sent to ccp@phenogenomics.cz till **31st October 2016**.

Maximum number of participants is 12. We will send a notification of acceptance to selected participants on 15th November 2016.



Czech Centre for Phenogenomics

DETAILED DAILY COURSE PROGRAMME

MONDAY 16TH JANUARY

- 12:30-13:00** **Welcome and Introduction**
R. Sedlacek, director of CCP, and J. Ruberte
- 13:00-14:00** General concepts in morphological mouse phenotyping. Directional terms and planes of the mouse body
J. Ruberte
- 14-15:30** Anatomy of development. Morphology of placenta
J. Ruberte
- 15:30-16:00** [Coffee break and refreshment](#)
- 16:00-17:00** Bone Ontogeny. Skeletal Nomenclature, bone architecture and types of bone. Strain, gender and age differences
J. Ruberte
- 17:00-18:00** Skeleton of thoracic limb: scapula, clavicle, humerus, ulna, carpal, metacarpal and digital bones. Identification of main anatomical features in isolated bones, X-ray and microCT images
M. Navarro
- 18:00-19:00** Skeleton of pelvic limb: coxal, femur, tibia, fibula, tarsal and metatarsal bones. Identification of main anatomical features in isolated bones, X-ray and microCT images.
M. Navarro

TUESDAY 17TH JANUARY

- 9:00-11:00** Skeleton of the head: skull and mandible. Identification of main anatomical features in isolated bones, X-ray and microCT images
J. Ruberte
- 11-11:30** [Coffee break and refreshment](#)
- 11:30-13:00** Skeleton of the trunk: vertebral column, ribs and sternum. Identification of main anatomical features in isolated bones, X-ray and microCT images
M. Navarro
- 13:00-14:00** [Lunch](#)
- 14:00-15:00** Arthrology: main synovial joints
M. Navarro
- 15:00- 16:00** Myology: types of muscles and their topography
M. Navarro



Czech Centre for Phenogenomics

- 16:00-16:30 Coffee break and refreshment
- 16:30-18:30 Dissection of main muscular groups
M. Navarro and J. Ruberte

WEDNESDAY 18TH JANUARY

- 9:00-10:00 Ontogeny of circulatory system. Anatomy of the heart
J. Ruberte
- 10:00-11:00 Structure of blood and lymphatic vessels. Components of the vascular wall.
J. Ruberte
- 11:00-11:30 Coffee break and refreshment
- 11:30-12:30 Localization, disposition and topography of main vessel trunks. Identification by X-ray angiography, CT and MRI.
M. Navarro
- 12:30-13:30 Lunch
- 13:30-15:30 Lymphatic system. Anatomy of spleen, thymus and lymphatic nodes. Visualization of lymphatic nodes by Evan's blue injection
J. Ruberte
- 15:30-16:00 Coffee break and refreshment
- 16:00-17:30 Respiratory apparatus: nasal cavities, larynx, trachea and lungs. Anatomy and Imaging
M. Navarro
- 17:30-19:00 Dissection of the thorax
M. Navarro and J. Ruberte

THURSDAY 19TH JANUARY

- 9:00-11:00 Digestive tract: oral cavity, pharynx, esophagus, stomach, intestine, liver and pancreas. Anatomy and imaging
M. Navarro
- 11:00-11:30 Coffee break and refreshment
- 11:30-13:30 Urinary organs and male and female genital organs. Anatomy and imaging.
J. Ruberte
- 13:30-14:30 Lunch



Czech Centre for Phenogenomics

14:30-16:30 Dissection of male abdomen and pelvic cavity

M. Navarro and J. Ruberte

16:30-17:00 [Coffee break and refreshment](#)

17:00-19:00 Dissection of female abdomen and pelvic cavity.

J. Ruberte and M. Navarro

FRIDAY 20TH JANUARY

9:00-11:00 Central nervous system: Development, anatomy and imaging.

J. Ruberte

11:00-11:30 [Coffee break and refreshment](#)

11:30-12:30 Vestibulocochlear organ. Anatomy and imaging.

M. Navarro

12:30-13:30 [Lunch](#)

13:30-15:00 Eye and related structures: Anatomy and imaging.

J. Ruberte

15:00-16:00 Retinal Vascularization. *In vivo* fluorescent angiography and scanning confocal microscopy analysis

J. Ruberte

16:00-16:30 [Coffee break and refreshment](#)

16:30-18:00 Dissection of the central nervous system, eye and ear.

J. Ruberte and M. Navarro

18:00 **Concluding remarks**

18:30 End of course / Departures

The days for two joint evening meals would be selected later.