



Infrafrontier

TRAINING COURSE

2ND COURSE ON MOUSE OSTEOLOGY: BASIS FOR X-RAY AND CT BONE PHENOTYPING

Program



BARCELONA, November 20-22, 2013
CBATEG and Veterinary School



Objective of the course

The aim of this Infrafrontier Training Course is capacitating participants to localize and to interpret the most common skeletal morphological abnormalities found in mutant mice. This will occur in the context of dedicated learning sessions devoted to the study of bone anatomy and the methodologies (X-ray, CT, Alizarin staining, etc) used to visualize the mouse skeleton. Each lecture will be followed by a practical session in which participants will work with real bone specimens and CT images. In addition to the theoretical and practical sessions, the course will include seminars where specific skeletal abnormalities found in mutant mice will be discussed.

This course is intended for technicians and/or scientists working in the area of bone mouse phenotyping.

Course coordinator:

Jesús Ruberte *Professor of Veterinary Anatomy. Head of the Mouse Imaging Platform and Morphological Analysis Unit. CBATEG. UAB*

Speakers:

Yann Herault *Director of Institut Clinique de la Souris (ICS) Strasbourg*

Marc Navarro *Professor of Veterinary Anatomy. UAB*

Ana Carretero *Professor of Veterinary Anatomy. UAB*

Luisa Mendes-Jorge *Professor of Veterinary Anatomy. FMV. Lisbon*

Víctor Nacher *Professor of Veterinary Anatomy. UAB (Secretary of the course)*

Assistants in practical sessions:

Mariana Lopez-Luppo

David Ramos

Registration dead line: October 31st 2013

Participation Fees:

- The organization will cover coffee breaks, lunches (on 20th, 21st & 22th), and the dinner on 21st for all participants.
- Registration fees: non Infrafrontier members (700 €)

Maximum number of participants: 15

For Inscription contact: victor.nacher@uab.cat

Wednesday, November 20 (at CBATEG)

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|-------------------|---|
| 9-9:30 | Welcome address and introductory remarks.
Fátima Bosch and Jesús Ruberte |
| 9:30-10:30 | Craniofacial CT applied to phenotype mouse models of Down syndrome
Yann Herault |
| 10:30-11 | Coffee break |
| 11-12 | Directional terms and planes of the mouse body. Bone nomenclature. Skeletal design, bone architecture and types of bone. Strain, gender and age bone differences.
Jesús Ruberte |
| 12-13 | Methodologies addressed to visualize the mouse skeleton: X-ray, CT, enzymatic bone cleaning and scanning electron microscopy.
Marc Navarro and Ana Carretero |
| 13-14:30 | Lunch (at Veterinary School) |
| 14:30-16 | Bone ontogeny. Osteogenesis and molecular basis of ossification. The genesis of the mouse skeleton.
Jesús Ruberte |
| 16-17 | Scapula, clavicle and humerus.
Ana Carretero |

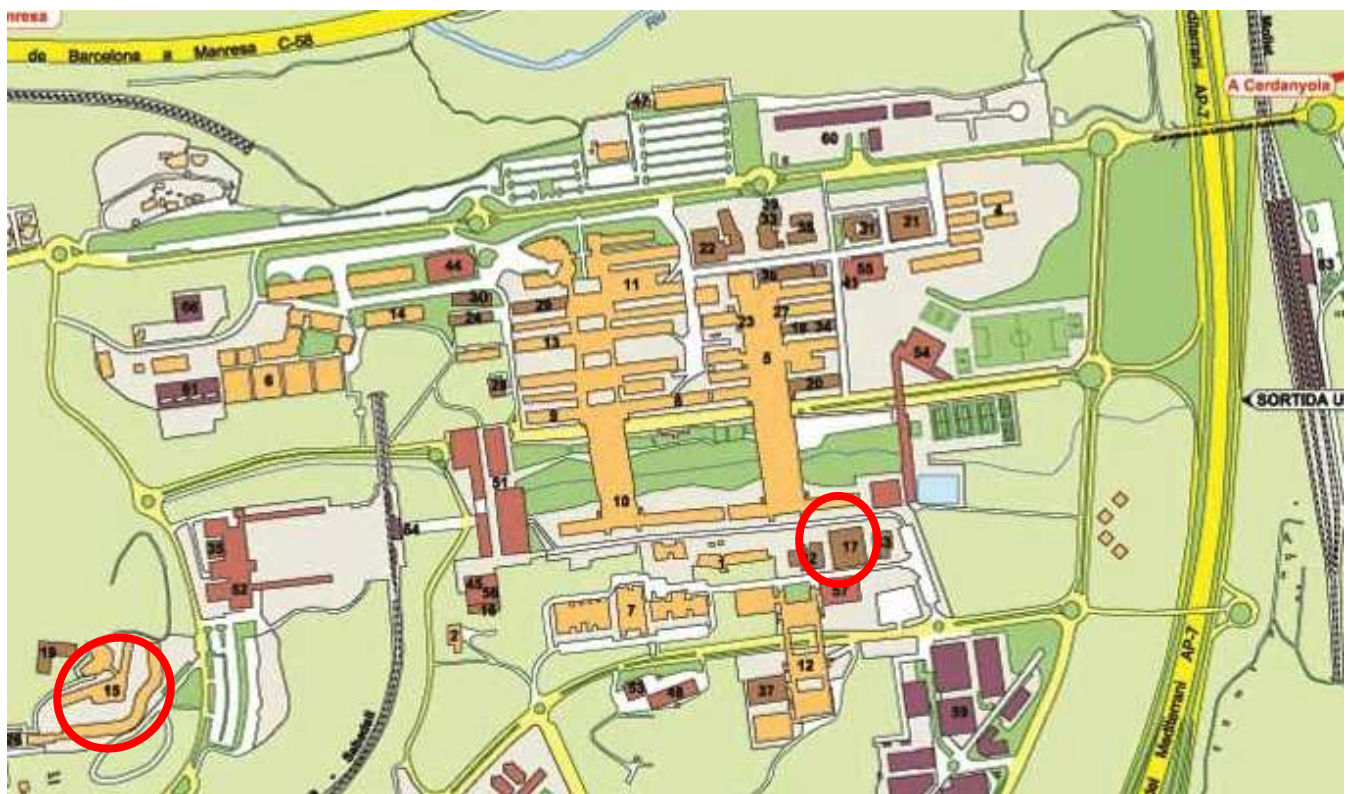
Thursday, November 21 (at Veterinary School)

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| 9-10 | Radius, ulna, carpal, metacarpal and digital bones.
Luisa Mendes-Jorge |
| 10-11 | Coxal, femur and patella.
Marc Navarro |
| 11-11:30 | Coffee break |
| 11:30-12:30 | Tibia, fibula, tarsal and metatarsal bones.
Luisa Mendes-Jorge |
| 12:30-13:30 | Skeleton of the head: neural part of the skull.
Jesús Ruberte |
| 13:30-15 | Lunch |
| 15-16 | Skeleton of the head: facial part of the skull.
Jesús Ruberte |
| 16-17:30 | Case seminar |
| 21 | Dinner (<i>La Marmita</i> Restaurant) |

Friday, November 22 (at Veterinary School)

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|-------------|---|
| 9-10 | Mandible, teeth and hyoid bone.
V́ctor Nacher |
| 10-11 | Cervical and thoracic vertebrae. Ribs and sternum.
Ana Carretero |
| 11-11:30 | Coffee break |
| 11:30-12:30 | Lumbar, sacral and caudal vertebrae.
V́ctor Nacher |
| 12:30-13:30 | Case seminar |
| 13.30- 14 | Concluding remarks

Lunch |



Campus UAB (know more at www.uab.es)
15. Veterinary School
17. CBATEG