

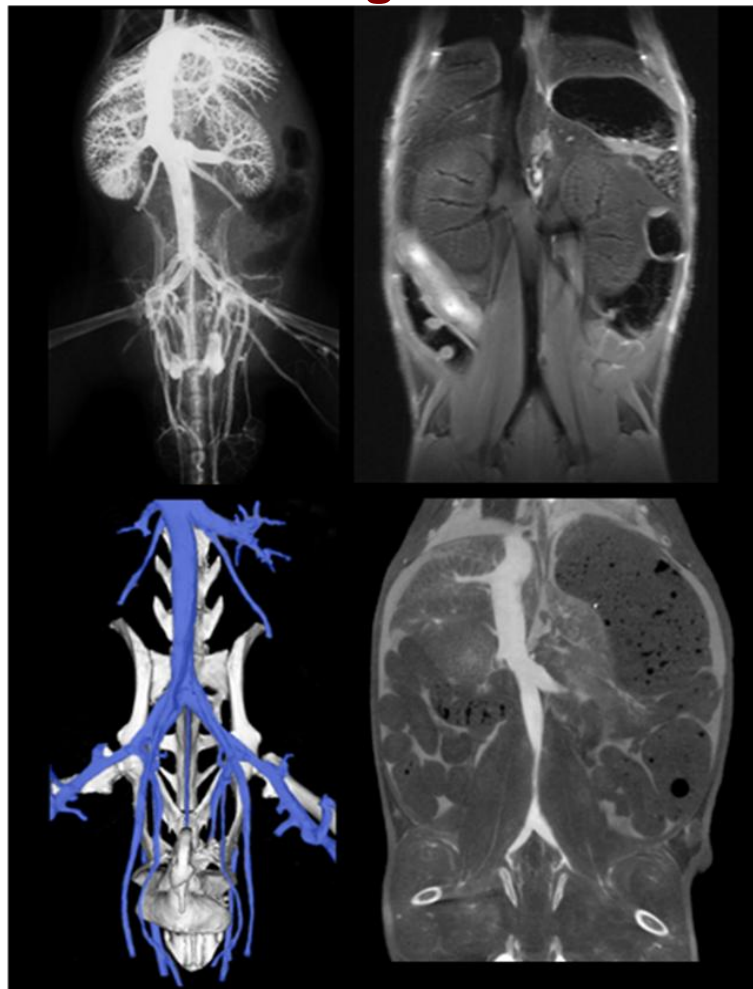


Infrafrontier

TRAINING COURSE

MOUSE BLOOD AND LYMPHATIC VESSELS PHENOTYPING

Program



BARCELONA, November 17-20, 2014
CBATEG and Veterinary School

cbateg
Centre de
biotecnologia
animal i teràpia gènica


FACULTAT DE
VETERINÀRIA
DE BARCELONA

UAB
Universitat Autònoma
de Barcelona

Objective of the course

The aim of this Infrafrontier Training Course is capacitating participants to localize and to interpret the most common vascular morphological abnormalities found in mutant mice. This will occur in the context of dedicated learning sessions devoted to the study of blood and lymphatic vessels anatomy, and the methodologies (Dissection, Vascular injection, Corrosion, Transparentation, CT, MRI, Transmission and Scanning Electron Microscopy, Immunohistochemistry, etc.) used to visualize the mouse circulatory system. Lectures will be followed by practical sessions in which participants will demonstrate and analyze mouse vessels with different technologies. 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 mouse phenotyping.

Course coordinator:

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

Speakers:

Miguel Torres. *National Center for Cardiovascular Research (CNIC)*

Marc Navarro *Professor of Veterinary Anatomy. UAB*

Ana Carretero *Professor of Veterinary Anatomy. UAB*

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

David Ramos. *Center of Animal Biotechnology and Gene Therapy (CBATEG)*

Anna Planavila *Biomedicine Institute (IBUB)*

Elisabeth Dominguez. *Department of Animal Medicine and Surgery. UAB*

Silvia Lope. *Nuclear Magnetic Resonance Service. UAB*

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

Assistants in practical sessions:

Mariana Lopez-Luppo

Joana Araujo Catita

Registration dead line: October 15th 2014

Participation Fees:

- The organization will cover coffee breaks, lunches (on 17th, 18th, 19th & 20th), and dinner on 19th for all participants.
- Registration fees: non Infrafrontier members (1,200 €)

Maximum number of participants: 10

For Inscription contact: victor.nacher@uab.cat

Monday, November 17 (at CBATEG)

- 9-9:30** **Welcome address and introductory remarks.**
Fátima Bosch and Jesús Ruberte
- 9:30-10:30** **(To be defined)**
Miguel Torres
- 10:30-11** **Coffee break**
- 11-12** **Circulatory System: General concepts and nomenclature.**
Historic milestones in the conceptual evolution of blood and lymphatic vessels.
Jesús Ruberte
- 12-13** **Structure of blood and lymphatic vessels. Components of vascular wall.**
Jesús Ruberte
- 13-14:30** **Lunch** (at Veterinary School)
- 14:30-16** **Blood vessel ontogeny. Molecular basis of angiogenesis and vasculogenesis. Vascular patterning.**
Ana Carretero
- 16-18** **Localization, disposition and topography of main vessel trunks. Identification by X-ray angiography, CT and MRI. Dissection of head, thorax, abdomen and limbs.**

Marc Navarro

Tuesday, November 18 (at Veterinary School)

- 9-11 **Vascularization of hearth: coronary vessels and aortic arch. Surgical techniques for vascular cannulation. Injection of plastic resins through the thoracic aorta. Corrosion of coronary arteries.**
Marc Navarro
- 11-11:30 **Coffee break**
- 11:30-13.30 **Vascularization of pancreas and liver. Indian ink injection and transparentation.**
Victor Nacher
- 13:30-15 **Lunch** (at CBATEG)
- 15-17 **Vascularization of kidney. Identification and interpretation of renal microvasculature by scanning microscopy (SEM).**
Ana Carretero
- 17-18 **Case seminar: Blood retinal barrier breakdown.**
Luisa Mendes-Jorge

Wednesday, November 19 (at CBATEG)

- 9-11 **Vascularization of the retina. In vivo fluorescent angiography.**
Jesús Ruberte
- 11-11:30 **Coffee break**
- 11:30-14 **Retinal blood vessel visualization by confocal scanning laser microscopy (CSLM).**
David Ramos
- 14-15 **Lunch**
- 15-17 **Vascularization of brain. MRI analysis of cerebral vascular flux.**

Marc Navarro and Silvia Lope

17-18 **Case seminar: Vascular functions of sirtuins.**
Ana Planavila

21 **Dinner** (*La Marmita* Restaurant)

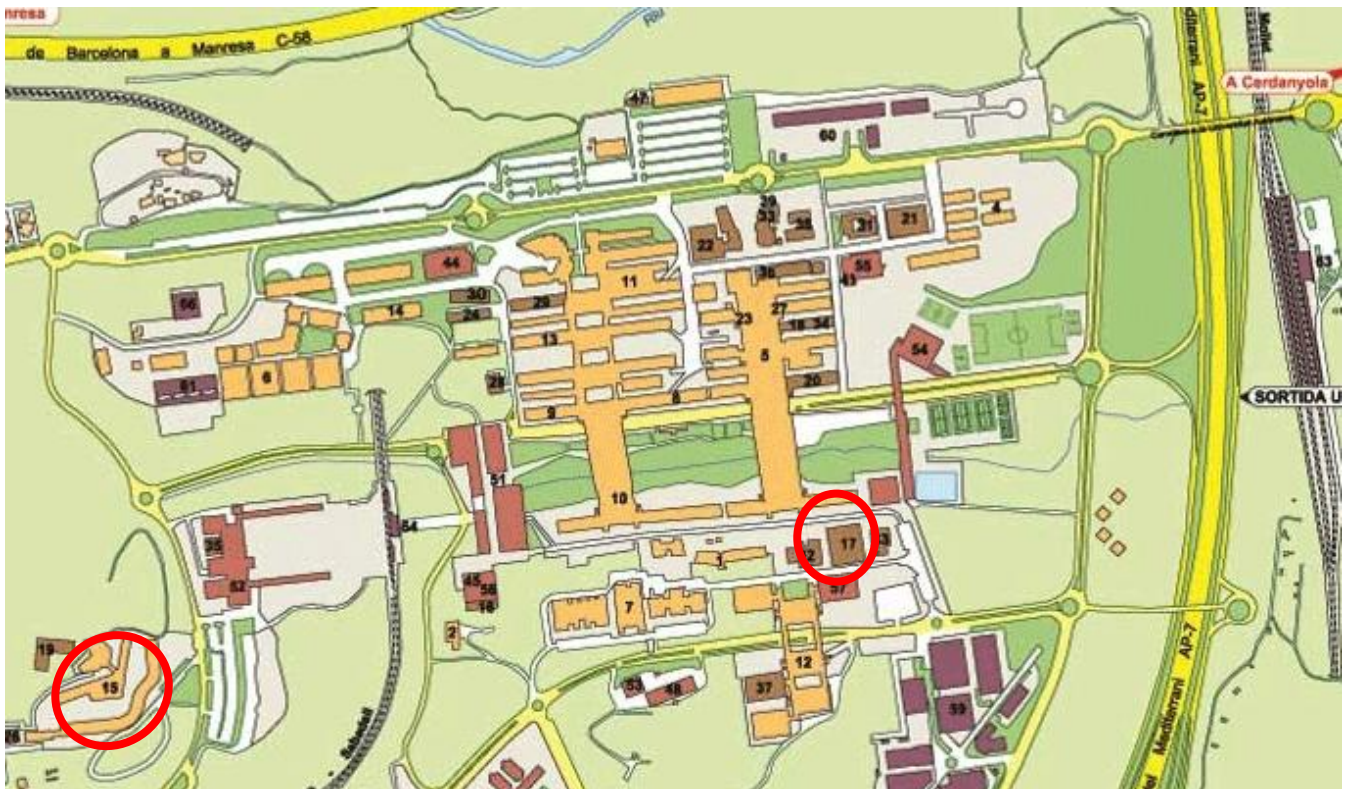
Thursday, November 20 (at Veterinary School)

9-10 **Non-invasive in vivo measurement of arterial hemodynamic parameters using high frequency ultrasound.**
Elisabeth Dominguez

10-12:30 **Lymphatic system. Localization and dissection of lymphatic nodes, cisterna chyli and thoracic duct. Demonstration of lymphatic flux by Evan's blue injection and hyperlipidic ingesta.**
Jesús Ruberte

12.30-13 **Concluding remarks.**

Lunch



Campus UAB (www.uab.es): 15. Veterinary School; 17. CBATEG