

# Mouse Blood and Lymphatic Vessels Phenotyping

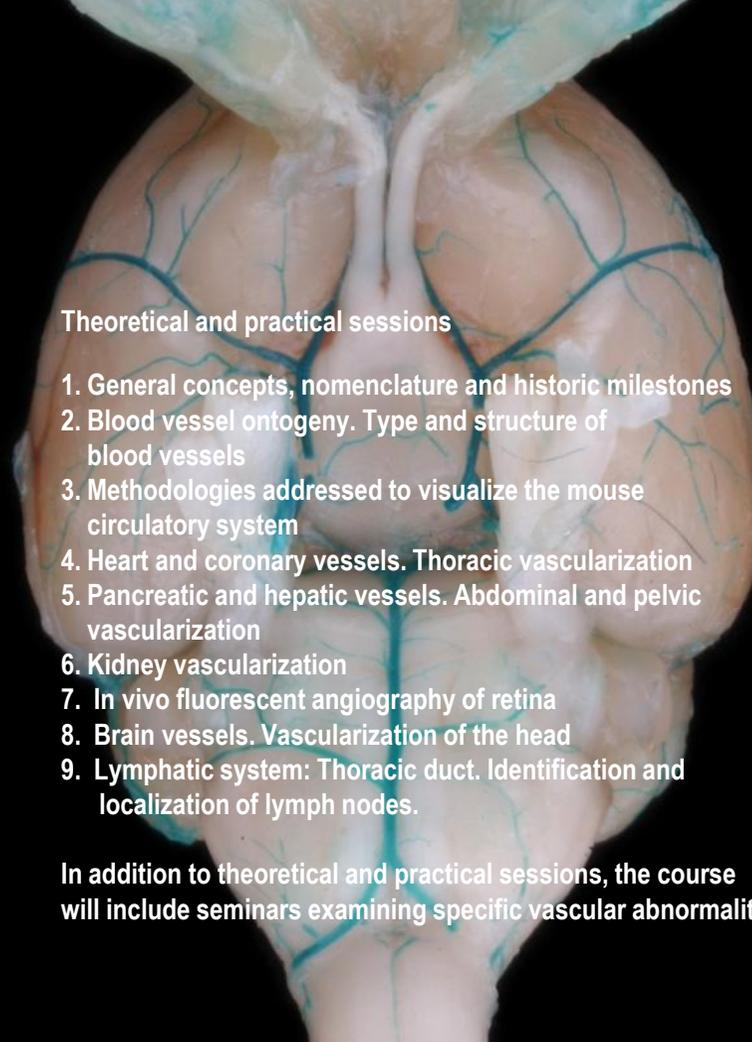
## Objective of the course

Different protocols have been widely developed for cardiac phenotyping. However, more scarce is the knowledge about the methodologies addressed to phenotype vascular abnormalities in mutant mice.

The aim of this course is to capacitate participants to localize and interpret vascular abnormalities in mutant mice.

In order to achieve this aim we will focus on learning about

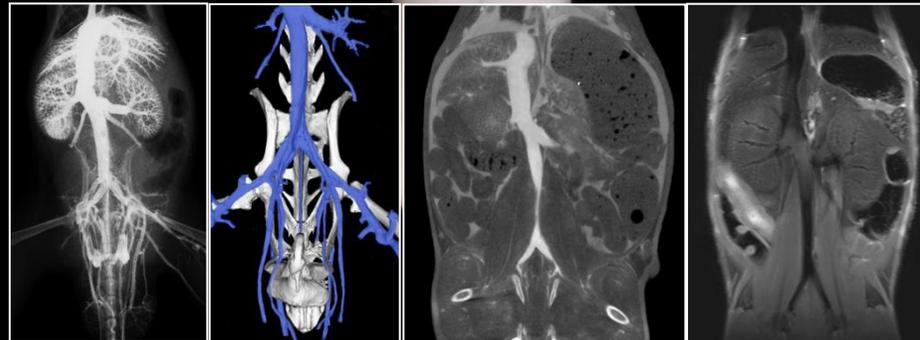
1. Injection techniques and macroscopic and microscopic visualization of blood and lymphatic vessels:
  - Surgical techniques of vascular injection.
  - Injection media and their visualization (plastic resins, latex, Indian ink, fluorescent substances and radiographic and paramagnetic contrasts).
  - Blood vessel visualization by dissection, conventional histology, confocal laser microscopy, SEM, TEM, X-ray, ultrasounds, CT, MRI and SLO.
2. Distribution, topography and structure of blood and lymphatic nodes and vessels in mice.



## Theoretical and practical sessions

1. General concepts, nomenclature and historic milestones
2. Blood vessel ontogeny. Type and structure of blood vessels
3. Methodologies addressed to visualize the mouse circulatory system
4. Heart and coronary vessels. Thoracic vascularization
5. Pancreatic and hepatic vessels. Abdominal and pelvic vascularization
6. Kidney vascularization
7. In vivo fluorescent angiography of retina
8. Brain vessels. Vascularization of the head
9. Lymphatic system: Thoracic duct. Identification and localization of lymph nodes.

**In addition to theoretical and practical sessions, the course will include seminars examining specific vascular abnormalities.**



## Speakers

- Ghina Bou** Institut Clinique de la Souris. France
- Jesús Ruberte** (Course coordinator)  
Head of the Mouse Imaging Platform. CBATEG
- Marc Navarro, Ana Carretero and Victor Nacher** (secretary)  
Professors of Veterinary Anatomy and Embryology. UAB
- Luisa Mendes-Jorge**  
Professor of Veterinary Anatomy. Lisbon University. Portugal
- Silvia Lope** MRI Service. UAB
- Elisabeth Dominguez** Ultrasound expert. UAB
- Anna Planavila** Biomedicine Institute IBUB
- David Ramos, Mariana López-Luppo and Joana Araujo** CBATEG

The course will take place at the CBATEG and the Veterinary School of the Autonomous University of Barcelona.  
08193 Cerdanyola del Valles  
Barcelona SPAIN

(see to location: [www.uab.cat](http://www.uab.cat))

**Equipment:** µCT eXplore Locus (GE). MRI (Bruker Biospec 7T). High-frequency ultrasound (Visualsonics). Laser scanning confocal microscope (TCS LP2 Leica). Scanner Laser Ophthalmoscope (HRAII Heildeberg Engineering)

**Duration:** Four days

**Number of participants:** 10 maximum

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