

1,5 ECTS Doctoral Course #3193

# The Vascular Brain

**Cerebrovascular development, cell signalling, blod flow dynamics, imaging methods and contributions to neurodegenerative disease**

**Center for Molecular Medicine, May 11-15th, 2020**

**Course purpose:** Brain function depends on constant supply of glucose and oxygen from blood vessels. Efficient communication between neural cells and vessels is essential for correct brain function and relies on selective transport of nutrients across the blood-brain barrier. Brains are particularly vulnerable to dysfunction of blood flow and loss of barrier properties which can lead to dementia and neurological disease. The purpose of the course is to deepen the understanding of concepts underlying cerebrovascular development, cell signaling, imaging methods and vascular contributions to neurodegenerative diseases.

## **Speakers List** (preliminary):

- **Maiken Nedergaard** Univ. Copenhagen - Denmark
- **Ali Erturk** LMU Munchen - Germany
- **Steven T Proulx** Univ. Bern - Switzerland
- **Martin Lauritzen** Univ. Copenhagen - Denmark
- **Benoit Vanhollebeke** Univ. Brussels - Belgium
- **Elisabeth Hillman** Univ. Columbia - US
- **Mickaël Tanter** Institut Langevin - France

**Brain glymphatic system**  
**Clear tissue brain imaging**  
**In vivo lymphatic function**  
**Neurovascular coupling**  
**Cerebrovascular development**  
**Cerebral hemodynamics**  
**Ultrasound flow imaging**

## Organizers

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