

UNIVERSITÀ DI TORINO School of Medicine and Surgery Department of Clinical and Biological Sciences University of Torino, Italy



"San Luigi Gonzaga" Didactic Center Regione Gonzole 10, Orbassano (TO)

Interdisciplinary Elective Didactic Activity

Cerebrovascular malformations: pathogenic mechanisms and therapeutic strategies 07/05/2025

(w) 08:50-09:00 - Prof. S. Francesco Retta – Introduction

(w) 09:00-10:00 - Prof. Salim Seyfried (Developmental Biology) Institute of Biochemistry and Biology, Potsdam University, Germany Modeling vascular anomalies in zebrafish

(w) 10:15-11:15 - Prof. Juan Zalvide (Developmental Biology) Department of Physiology, Santiago de Compostela University, Spain Identification of the inhibitory mechanisms of brain cavernoma development in cellular and mouse models

(w) **11:30-12:30 -** Dr. **Souvik Kar** (Clinical and Molecular Biology) International Neuroscience Institute (INI), Hannover, Germany

Implication of non-coding RNAs in cerebral cavernous malformation (CCM) disease pathogenesis and severity

In-person seminars (S) and interactive webinars (W)

organized by Prof. Saverio Francesco Retta and Dr. Andrea Perrelli





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(w) **14:00-15:00 -** Prof. **Eva Faurobert** (Cell & Molecular Biology) Institute for Advanced Biosciences, (IAB), CNRS, Grenoble, France

Role of mechanotransduction in the pathogenesis of cerebral cavernous malformation (CCM) disease

(w) **15:15-16:15 -** Prof. **Angela Glading** (Cell & Mol. Biology) Department of Pharmacology and Physiology, University of Rochester Medical Center, Rochester, NY, USA

The multifaceted roles of the KRIT1 protein: a master regulator of cerebrovascular quiescence





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(s) 09:00-10:00 - Prof. S. Francesco Retta (Applied Biology) Department of Clinical and Biological Sciences, University of Torino From genes to precision medicine: the free climbing of cerebral cavernous malformation (CCM) disease

(s) 10:15-11:15 - Dr. Raffaella Mastrocola (General Pathology) Department of Clinical and Biological Sciences, University of Torino KRIT1 deficiency leads to metabolic alterations and fibrogenic responses in extracerebral tissues

(s) 11:30-12:30 - Dr. Afshin Bagherzadeh (Molecular Biology) Department of Clinical and Biological Sciences, University of Torino KRIT1 in hematological malignancies: potential roles and diagnostic/therapeutic implications



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(w) **14:00-15:00** - Prof. **Luigi Battaglia** (Pharmaceutic Technology) Department of Drug Science & Technology, University of Torino, Italy

Lipid nanocarriers: versatile tools towards precision nanomedicine for brain diseases

(w) **15:15-16:15 -** Dr. **Andrea Perrelli** (Applied Biology) Department of Pharmacology and Physiology, University of Rochester Medical Center, Rochester, NY, USA

Nuclear/cytoplasmic trafficking of KRIT1 regulates endothelial barrier function and cell homeostasis



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(s) 09:00-10:00 - Prof. Giovanni B. Ferrero (Clinical Genetics) Department of Clinical and Biological Sciences, University of Torino Powerful discovery of disease-causing mutations by next-generation sequencing (NGS) technologies

(s) 10:15-11:15 - Prof. S. Francesco Retta (Applied Biology) Department of Clinical and Biological Sciences, University of Torino Identification of risk factors and biomarkers for cerebral cavernous malformation (CCM) disease

(s) 11:30-12:30 - St. Amir H. Mousavi (Medicine & Surgery) School of Medicine & Surgery, University of Torino, Italy The clinical journey of CCM patients: a peer-to-peer dialogue inspired by an Erasmus stage in Istanbul



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(w) 14:00-15:00 - Prof. Marco Fontanella (Neurosurgery) Department of Surgical Specialties, University of Brescia, Italy Clinical and neurosurgical features of cerebral cavernous malformation disease

(w) 15:15-16:15 - Prof. Daniele Rigamonti (Neurosurgery)

Department of Neurosurgery, Johns Hopkins School of Medicine, Baltimore, MD, USA

A brief history of cerebral cavernous malformations: a personal perspective

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