



University of
Zurich UZH

Institute for
Regenerative
Medicine • IREM



Colloquium

Clinical Colloquium Regenerative Medicine

Monday, January 27th, 13:00 – 14:00

Institute for Regenerative Medicine - IREM

Wagistrasse 12, 8952 Schlieren

Seminar room 9th floor

Dr. Ruiqing Ni

Institute for Biomedical Engineering, ETH & University of Zurich

Multimodal imaging in mouse models of Alzheimer's disease

The advances in neuroimaging in the last decades have bridged the translational gap and enabled our understanding of brain under physiological and disease conditions. In animal models of Alzheimer's disease, multiscale and multimodal imaging (positron emission tomography, magnetic resonance imaging, and optical imaging) have enabled non-invasive visualization of the neuropathology (amyloid-beta and tauopathy), neurodegeneration, as well as functional alterations. We recently developed novel optoacoustic tomography (resolution 100 μm) and fluorescence microscopy (resolution 15 μm) imaging methods that enable whole brain non-invasive transcranial detection of amyloid-beta/tau at high resolution. These platforms offer new prospects for *in vivo* studies into Alzheimer's disease mechanisms in animal models as well as longitudinal monitoring of therapeutic responses targeting at amyloid-beta and tau.

Organizer: Prof. Simon P. Hoerstrup / Prof. Roger M. Nitsch

Chair: Dr. Steffen M. Zeisberger / Dr. Christian Tackenberg