UNIVERSITÄT BERN
Medizinische Fakultät
Vetsuisse Fakultät
Phil.-Nat. Fakultät

Microscopy Imaging Center

Workshop

Title:	**Optical Coherence Tomography for mouse and zebrafish models**
Date, duration:	On demand, 1 day
Location:	Department of Ophthalmology, Inselspital, University of Bern, Freiburgstrasse 6, 3010 Bern
Lecturer(s):	Prof. Dr. Volker Enzmann (DBMR)
Number of participants:	1 – 4 students
Target audience:	PhD students of the University of Bern Lecture Series on Advanced Microscopy plus exam (KSL 9256)
Registration:	Send request to Prof. Volker Enzmann (volker.enzmann@insel.ch)
KSL:	470961
Reward:	0.5 ECTS
Costs:	Free of costs for members of the University of Bern. Course costs for external participants: on enquiry. PhD students enrolled in the Graduate School for Cellular and Biomedical Sciences (GCB) can apply for refund at the PhD program Cutting Edge Microscopy (limited until 31st December 2022)
Learning goals:	At the end of the module, students are expected to be able to understand the basics behind OCT-based retina imaging and its use in ophthalmic research.
Description:	Spectral domain optical coherence tomography (SD-OCT) is a newly developed imaging modality providing non-invasive means to assess the posterior pole of the eye. The visualization of infrared images and fundus autofluorescence provides additional data about this structure. Together it allows for the analysis of retinal morphology and the assessment of structural changes within the retina in rodents and zebrafish.

Prof. Dr. phil. nat. Ruth Lyck
MIC Koordinatorin
Theodor Kocher Institut
Freiestrasse 1
CH-3012 Bern

Telefon +41 31 631 41 54
ruth.lyck@mic.unibe.ch
www.mic.unibe.ch

Course structure:	During the module, the students will actively participate in imaging the retina of mice (BALB/c, C57BL/6) and zebrafish (AB Oregon) before and after laser-induced damage. In order to quantify degenerative changes retinal thickness will be measured in mice with pharmacologically induced retinal damage. Additionally, specific cell types (microglia) will be visualized in CX3CR1^{GFP} mice.
Assessment:	To be determined.