UNIVERSITÄT BERN

MIC training: FRET microscopy

Date:	November 05-06, 2024
Time:	9 am – 5 pm
Location:	ICB, Baltzerstrasse 4, 3012 Bern, C159 (05.11.24) IPS, Altenbergrain 21, 3013 Bern, 101 (06.11.24)
Trainers:	Prof. Olivier Pertz, Dr. Yury Belyaev, University of Bern (CH); Dr. Arne Seitz, EPFL (CH); Prof. Ora Hazak, University of Fribourg (CH); Dr. Timo Zimmermann, EMBL Heidelberg (DE); Dr. Jens Peter Gabriel, Leica, Mannheim (DE).
Organizer:	Dr. Y. Belyaev, MIC of the University of Bern (www.mic.unibe.ch). Supported by the PhD specialization Cutting Edge Microscopy.
Number of participants:	minimum 6, maximum 8.
Registration:	until October 29, 2024, here.
Target audience:	PhD students, postdocs, PIs and everyone who requires FRET microscopy in their research. Participants of Cutting Edge Microscopy specialization program are particularly invited. Only the participants with running or future FRET projects are accepted.
Credits:	Certificate of attendance. PhD students can gain 1 ECTS from this course by giving a presentation on application of course learning outcome. The date of presentation will be agreed on mutually.
Background:	Förster resonance energy transfer (FRET) is a mechanism of non-radiative energy transfer between two chromophores located at nanometre range. This is a powerful technique widely used in biology for measurement of molecular interactions.
Content:	Principles of FRET and FRET-FLIM. How to perform FRET measurements. Fluorescence proteins and biosensors. Quantitative imaging.
Learning outcome:	Participants will learn the basics of FRET and main methods of (quantitative) FRET measurement.
Course fee:	Free or charge. Cancelation after October 29, 2024 or no show – administrative fee of 100 CHF.
Schedule:	See next page.

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Time	Day 1 Tuesday 05.11.2024	Day 2 Wednesday 06.11.2024
9:00-12:00	Lecture, ICB, C159 FRET Basics T. Zimmermann, EMBL FRET measurement methods A. Seitz, EPFL Genetically encoded FRET biosensors for cell biology O. Pertz, ICB	Lectures, IPS, 101 Quantitative imaging Y. Belyaev, MIC FLIM-FRET J. Gabriel, Leica Scientific Talk FLIM-FRET Ora Hazak, Uni FR
12:00-13:30	Lunch	Lunch
13:30-17:00	Hands-on Sensitized emission A. Seitz, EPFL Ratio imaging T. Zimmermann, EMBL	Hands-on Acceptor photobleaching Y. Belyaev, MIC FLIM-FRET J. Gabriel, Leica