Cell Migration – Practical Course for GCB students

Dates: October 25 - 29, 2020
Time: full day – full week participation required
Organizers/Tutors: Prof. Dr. Britta Engelhardt, Prof. Daniel Legler, PD Dr. Ruth Lyck, Dr. Giuseppe Locatelli, Dr. Steven Proulx
Venue: Theodor Kocher Institute, Freiestrasse 1, 3012 Bern

Course Description:
The weeklong laboratory course gives a practical and theoretical introduction into methods of immune cell migration assays:

- Cell adhesion assay (leukocytes or tumor cells on endothelial or epithelial cells)
- «Stamper-Woodruff» frozen section- adhesion assay
- Transmigration assay (leukocytes or tumor cells across endothelial or epithelial monolayers)
- Chemotaxis assays
- Flow Cytometry: Characterization of molecular traffic signals on control and inflamed endothelial or epithelial cells (immunofluorescence, FACS analysis)
- In vivo homing studies with fluorescently labeled immune or tumor cells
- In vitro flow assays: Studying leukocyte or tumor cell interaction with the vascular wall under physiological flow. Leukocytes/tumor cells on recombinant proteins or endothelial cells
- Demonstration of in vivo live cell imaging using epifluorescence, twophoton and near infrared intravital microscopy: leukocyte recirculation in vivo

Limitations: 6 students (with waiting list)
Priority will be given to those students who have selected this course in agreement with their mentor, within the framework of the GCB

Prerequisites:
1. Listed as "Mandatory" on Doctoral Agreement
2. Supervisor's Signed Confirmation (form available from info@gcb.unibe.ch) that all course expenses will be paid by Supervisor's institution in the event of late (not able to find replacement) cancellation

Credits: 2.0 ECTS
Registration: via CTS/KSL, root no.102642 (with active waiting list)
Registration open from: October, 2020
Deadline for registration: September 2021
Exam: To Be Announced