

## Cell Migration – Practical Course for GCB students

**Dates:** October 3<sup>rd</sup> to October 7<sup>th</sup>, 2022  
**Time:** full day – full week participation required  
**Organizers/Tutors:** Prof. Dr. Britta Engelhardt, Prof. Daniel Legler, Prof. Dr. Ruth Lyck, 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 allowing to study cell migration with a focus on immune cell migration:

- Cell adhesion assay (immune cell interaction with endothelial or epithelial cells)
- «Stamper-Woodruff» frozen section- adhesion assay
- Transmigration assay (immune cell migration across cellular monolayers)
- Chemotaxis assay
- Characterization of molecular traffic signals on control and inflamed endothelial or epithelial cells (immunofluorescence, flow cytometry)
- *In vivo* homing studies with fluorescently labeled immune cells
- *In vitro* live cell imaging: Immune cell interaction with endothelial cells under physiological flow
- *In vivo* live cell imaging using epifluorescence, two-photon and near infrared intravital microscopy: immune cell trafficking *in vivo*

**Limitations:** 6– 8 students (with waiting list)  
Priority will be given to those students who are enrolled in the PhD Program Cell Migration and/or have selected this course in agreement with their mentor, within the framework of the GCB

**Credits:** 2.0 ECTS

**Registration:** via CTS/KSL Nr. 102642

**Registration open from:** May 2022

**Deadline for registration:** Thursday, September 1<sup>st</sup>, 2022

**Exam:** Oral discussion on last day and written report