

## Vascular Cell Biology – Practical Course for GCB students

**Dates:** May 5, 2025 – May 9, 2025  
**Time:** full days – **full week participation required**  
**Organizers/Tutors:** Prof. Dr. Britta Engelhardt, Dr. Urban Deutsch, 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 of vascular cell biology

- Analysis of vascular development by employing transgenic reporter mice
- Isolation and culture of primary vascular and lymphatic endothelial cells
- Human induced pluripotent stem cell derived endothelial cell cultures
- Phenotypic characterization of primary endothelial cell cultures: detection of contaminating cells, etc. by immunofluorescence stainings and analysis by fluorescence microscopy and flow cytometry
- Determining functional alterations of endothelial cells in inflammation: phenotype, vascular permeability and adhesiveness for blood components *in vitro* and *in vivo*

**Limitations:** 6-8 students (with waiting list)  
Priority given to those students who have selected this course in agreement with their mentor, within the framework of the GCB and have listed it as «mandatory requirement» in their Doctoral Agreement

**Credits:** 2.0 ECTS  
**Registration:** CTS/KSL, Root no. 103079 (with active waiting list in KSL)  
**Deadline for registration:** Thursday, April 3, 2025  
**Exam:** Oral discussion on last day and written report