Vascular Cell Biology – Practical Course for GCB students

Dates:	**June 8, 2026 – June 12, 2026**
Time:	full days – full week participation required
Organizers/Tutors:	Dr. Urban Deutsch, Prof. Dr. Britta Engelhardt, Prof. Dr. Ruth Lyck, PD Dr. Steven Proulx
Venue:	Theodor Kocher Institute, Freiestrasse 1, 3012 Bern

Dive with us into the exciting world of vascular biology!
This intensive, week-long laboratory course immerses students in experimental and conceptual foundations of modern vascular cell biology research.

What you'll experience:

- **Explore vascular development** using transgenic reporter mice to visualize blood and lymphatic vessels in vivo
- **Isolate and culture primary vascular and lymphatic endothelial cells**, gaining essential cell culture skills
- **Work with human induced pluripotent stem cell–derived endothelial cells**, connecting basic research to regenerative medicine
- **Master phenotypic analysis of endothelial cells** using immunofluorescence, advanced fluorescence microscopy, and flow cytometry
- **Investigate endothelial function during inflammation**, including changes in cell phenotype, vascular permeability, and adhesion to blood components—both in vitro and in vivo

By the end of the course, students will have practical experience with state-of-the-art techniques, a deeper understanding of vascular biology in health and disease, and the confidence to apply these methods in future research projects.

Limitations:	6-8 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 and have listed it as «mandatory requirement» in their Doctoral Agreement
Credits:	2.0 ECTS
Registration:	via CTS/KSL, root no. 103079 (with active waiting list)
Deadline for registration:	**Friday, May 8, 2026**
Exam:	Oral discussion on last day and written report