

Principles in Transgenic Mouse Technology

CTS/KSL 394710

- Dates: Thursday, September 21 - Friday, September 22, 2017
- Time & Venue: **Thursday, 21.09.17:** 8:00-12:00 & 13:00-17:00
Mikroskopie Hoersaal (H431), Institute of Pathology
Murtenstrasse 31, 3008 Bern
- Friday, 22.09.17:** 8:00-12:00 & 13:00-17:00
Auditorium EG16, ground floor, Department of Chemistry &
Biochemistry, Freiestrasse 3, 3012 Bern
- Lecturers: PD Dr. Charaf Benarafa, Institute for Virology and Immunology
Dr. Urban Deutsch, Theodor Kocher Institute
PD Dr. Philippe Krebs, Institute of Pathology
- Exam: Friday, December 1, 2017, 14:00-16:00
Auditorium EG16, ground floor, Department of Chemistry &
Biochemistry, Freiestrasse 3, 3012 Bern
- ECTS: 1.0, with exam—for GCB students only.
- Animal experimentation: Approved for 2 days of continuing education (Canton Bern)
- Registration: Required, deadline: Friday, September 8, 2017
Email: Ms Nora Baronian, nora.baronian@gcb.unibe.ch
Indicate your name, matriculation number, study program (GCB,
ProDoc, Master, etc.) if applicable and whether you will take the exam.

Open to PhD Students of the GCB, ProDoc students, Post-doctoral fellows,
MSc students in Biomedical Sciences or in Molecular Life Sciences.

Note: The course is not officially recognized for MSc programs, but all participants can get the continuing education credits for animal experimentation.

Space limited to 40 participants.

Program

- Introduction on transgenic mice and their usefulness in research
- Biology of the laboratory mouse
- Mouse embryonic development
- Random mutagenesis
- Conventional transgenesis by pronuclear injection
- Inducible gene expression systems
- Lentiviral transgenesis
- Gene trap technology
- Generation of knock-out mice by homologous recombination in ES cells
- Recombinases and conditional knock-outs
- Recombination mediated cassette exchange (RMCE)
- Designer nucleases and CRISPR/Cas technology
- Mouse phenotyping programs
- Discussion of examples