

Workshop on 3D cell culture models: lung, intestine and skin tissues

Adolphe Merkle Institute, Fribourg, Switzerland

8. and 9. July 2019

Content and objectives

3D culture systems present an important advancement in cell culture techniques. Constructed from, the 3D models simulate in vivo situation closer than conventional 2D cell culture approaches, and present invaluable systems for **fundamental and applicative cell biology research** in vitro.

Target group

Technical and scientific staff members, including MSc and PhD students, experienced in basic 2D cell culture work.

Application

- **No registration fee**
- **Registration is obligatory** and is open from 1. May – 20. June 2019 [here](#).
- Lunch and dinner, travel and accommodation costs to be covered by the applicants
- Travel grants will be awarded
- Active participation of the applicants:
 - Abstract submission (250 words) for oral presentations and travel grants.

Theory

Multicellular 3D cell models:

- Primary cells and cell line-based
- Air-liquid interface
- Characterisation:
 - Morphology
 - Barrier integrity
 - Biological responses

Hazard studies with 3D cell models

Practice

- Assembling 3D cell models
- Isolation of primary immune cells
- Model characterisation:
 - Microscopy: phase contrast and confocal laser scanning microscope, including live cell imaging
 - TEER
 - Exposure techniques at the air liquid interface

Teachers

- **Prof. Dr. Barbara Rothen-Rutishauser**, the establisher of an advanced human 3D lung model, expert in application of 3D cell models for hazard assessment *in vitro*.
- **Post-doctoral scientists and PhD students**, experienced in advanced cell culture techniques.

Location

The workshop will be held in **Fribourg**, a picturesque medieval town in western **Switzerland**, at the **Adolphe Merkle Institute**.

For more information visit:
<https://www.ami.swiss/>



Day 1: 8. July 2019

9.00-9.30	Arrival and registration (coffee)
10.00-11.30	Theoretical part Prof. Dr. B. Rothen-Rutishauser
11.30-13.00	Lunch and tour of the institute
13.00-14.00	Selected presentations from the participants
14.00-16.30	Practical part: cell culture labs
16.30-17.30	Realistic exposures: lung model
19.00-21.00	Dinner

Day 2: 9. July 2019

9.00-12.30	Practical part: cell culture labs (two parallel sessions)
12.30-13.30	Lunch
13.30-16.00	Practical part: cell culture labs (two parallel sessions)
16.00-17.00	Discussion: cell culture troubleshooting, different characterization methods, questions of audience