

# Summer School on Advanced Biotechnology 2017 - Program

## SUNDAY, September 3, 2017

18.00 - Welcome dinner

Address:  
Espace Provins  
Rue de l'Industrie 22  
CH - 1950 Sion

The Espace Provins is located in the area of the station, at 10' on foot.

From the railway station, take the underground passage (southwards), go across the parking, take the road on your left. Search for a brown building on your right.



## MONDAY, September 4, 2017

- 08.00 – 08.45 : Registration
- 08.45 – 09.00 : Introduction and Welcome

SESSION 1 – TISSUE ENGINEERING - Chairman : Jack Rohrer

- 09.00 – 09.30 : **Tissue Engineering - Polymeric scaffolds structure tailoring**  
Valerio Brucato, University of Palermo
- 09.30 – 10.00 : **Biocompatible materials**  
Efrain Carreño-Morelli, University of applied sciences, Sion > *no presentation !*
- 10.00 – 10.30 : **Macromolecular crowding, a platform technology to make microenvironments in cell culture**  
Michael Ragonath, University of applied sciences, Wädenswil
- 10.30 – 11.00 : *Coffee break*

- 11.00 - 11.30 : **Drug delivery from the biopolyester poly(3-hydroxybutyrate-co-3-hydroxyvalerate)**  
Adolfo Gonzalez, University of applied sciences, Sion
- 11.30 – 12.00 : **Poly( $\beta$ -L-malic acid): water soluble biopolyester produced by fungi**  
Markus Künzi, University of applied sciences, Sion

#### SESSION 2 - FUNCTIONAL GENOMICS - Chairperson : Sergio Schmid

- 12.00 – 12.30 : **The Echinoid hbox12/pmar1/micro1 multigene family: expression, functions and evolution**  
Vincenzo Cavalieri, University of Palermo > *no presentation !*
- 12.30 – 14.00 : *Lunch*
- 14.00 – 14.30 : **Comprehensive molecular diagnostics and treatment recommendations in cancer**  
Daniel Stekhoven, Nexus, ETH Zürich

#### SESSION 3 - PRODUCTION OF BIOMOLECULES - Chairperson : Simon Crelier

- 14.30 – 15.00 : **Hints from differential proteomics for a rational yield improvement of biomolecule production by microbial fermentation**  
Giuseppe Gallo, University of Palermo
- 15.00 – 15.30 : **Generation of recombinant collagenases class I & II. A new approach in cell purification for research and clinical applications**  
Giulio Gherzi, University of Palermo
- 15.30 – 16.00 : *Coffe Break*
- 16.00 – 16.30 : **Biosimilars from an R&D and business perspective**  
Gerrit Hagens, University of applied sciences, Sion > *no presentation !*
- 16.30 – 17.00 : **P2T Innovation Centre: production of Cobrotoxin B in *E.coli* and *P. pastoris***  
Sarah Wegmüller, University of applied sciences, Sion

## TUESDAY, September 5, 2017

#### SESSION 4 - DRUG DISCOVERY - Chairperson : Gerrit Hagens

- 08.00 – 08.30 : **Epitranscriptomics in mouse and plants**  
Valentina Perrera, University of Padova
- 08.30 – 09.00 : **Drug screening in soil algae**  
Maren Kruus, MCI – The Entrepreneurial School, Innsbruck
- 09.00 – 09.30 : **Antibiotic resistance : the search for the unwanted**  
Eric Kübler, University of applied sciences, Muttenz
- 09.30 – 10.00 : **From plant microbiota to plant probiotics**  
Anna Maria Puglia, University of Palermo
- 10.00 – 10.30 : **In vitro bio-impedance measurement for the characterization of biological barriers**  
Adrien Roux, University of applied sciences, Geneva
- 10.30 – 11.00 : *Coffee break*
- 11.00 – 11.30 : **Modelling Alzheimer's disease in vitro**  
Laura Suter-Dick, University of applied sciences, Muttenz

SESSION 5A - DIAGNOSTICS - POINT-OF-CARE - Chairperson : Marc Pfeifer

- 11.30 – 12.00 : **Meeting sustainable development goals : an affordable mobile diagnostic to aid vaccination in the developing world**  
Jobie Budd, University College of London
- 12.00 – 12.30 : **“Active” antibiotic monitoring for personalised treatment at the Point-of-Care**  
Natascha Kappeler, University of applied sciences, Muttenz > *no presentation !*
- 12.30 – 14.00 : *Lunch*
- 14.30 : Social Event
- 18.30 : Get-Together Dinner

## WEDNESDAY, September 6, 2017

SESSION 5B - DIAGNOSTICS - POINT-OF-CARE - Chairperson : Natascha Kappeler

- 08.30 – 09.00 : **Automatized measuring systems with bacterial and cellular biosensors**  
Martial Geiser, University of applied sciences, Sion
- 09.00 – 09.30 : **Cell based bioactivity assays**  
Peter Leitner, MCI – The Entrepreneurial School, Innsbruck
- 09.30 – 10.00 : **Using induced pluripotent stem cells (iPSCs) for cell-based assays**  
Jack Rohrer, University of applied sciences, Wädenswil
- 10.00 – 10.30 : **Developments in bioanalytics and diagnostics**  
Jean-Manuel Segura, University of applied sciences, Sion
- 10.30 – 11.00 : *Coffee break*

SESSION 6 - APPLIED BIOTECHNOLOGY - Chairperson : Manfred Zinn

- 11.00 – 11.30 : **On-line monitoring and control of a fed-batch wine fermentation**  
Michal Dabros, University of applied sciences, Fribourg
- 11.30 – 12.00 : **Efficient production of lactate-based bioplastic in engineered *E. coli* using fed-batch fermentation**  
Yamasaki Takahashi, University of Hokkaido
- 12.00 – 12.30 : **Phosphate recovery with a microbial electrolysis cell and the metagenomic analysis of the co-powering microbiome**  
Fabian Fischer, University of applied sciences, Sion

12.30 : Wrap-up

13.00 : *Lunch*