

DFG Research Training Group "TJ-Train", GRK 2318
Program of the Summer School, September 20-21, 2019



September 20, 2019

- 09:00 – 09:10 Welcome by **Prof. Jörg Schulzke**, Coordinator of the GRK 2318
- Chair:** **Izabela Kowalczyk, Carlos Ayala Torres**
- 09:10 – 10:10 **1st Plenary lecture by Prof. Lorenza González-Mariscal**, Mexico City, Mexico
Beyond ZO-2 canonical function
- 10:10 – 10:40 **Roman Mannweiler:** *Impedance spectroscopy indicates multiple barriers in stratified epithelia*
- 10:40 – 11:00 Coffee break**
- Chair:** **Hannes Gonschior, Roman Mannweiler**
- 11:00 – 12:00 **Lecture 1 by Gerd Krause:** *Structure-function relationships of tight junction protein interactions*
- 12:00 – 12:30 **Laura-Sophie Beier:** *Targeting of claudins by CPE-based modular biologicals*
- 12:30 – 13:00 **Caroline Hempel:** *Determinants for claudin-3 and -10b polymerization revealed by mutagenesis and cellular analysis*
- 13:00 – 14:00 Lunch break**
- Chair:** **Caroline Hempel, Janna Leiz**
- 14:00 – 14:30 **Izabela Kowalczyk:** *Integrity of the stem cell niche in the developing brain-mechanisms shaping the neural tube*
- 14:30 – 15:00 **Hannes Gonschior:** *Nanoscale segregation of Claudin regulates paracellular ion flux over tight junction*
- 15:00 – 15:20 **Marjann Schäfer:** *Functional characterization of the ALOX15 orthologs in the tree shrew*
- 15:20 – 15:40 **Florian Reisch:** *Evolution of Alox15 orthologs in marine mammals*
- 15:40 – 15:50 **Lucas Heils:** *Clostridium difficile Toxin effects on intestinal barrier function*
- 15:50 – 16:30 Coffee break**
- Chair:** **Deborah Delbue, Carolin Grünhagen**
- 16:30 – 17:00 **Praveen Natthamilarasu:** *Campylobacter concisus impairs epithelial barrier function and electrogenic sodium transport in the colonic HT-29/B6-GR/MR cell model*
- 17:00 – 17:30 **Fábia Lobo de Sá:** *Curcumin mitigates immune-induced epithelial barrier dysfunction by Campylobacter jejuni*
- 17:30 – 18:00 **Jiachen Hu:** *Role of the tricellular tight junction in inflammatory bowel diseases*
- 18:00 – 18:30 **Carlos Ayala Torres:** *Contribution of the tricellular tight junction to paracellular water permeability*
- 19:00 – 22:00 Poster, beer and wine**

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September 21, 2019

Chair: Murat Seker, Jiachen Hu

09:00 – 10:00 **2nd Plenary lecture by Prof. Michael Koval**, Atlanta, USA: *Spikes and waves: How tight junction morphology provides clues to the control of barrier function*

10:00 – 10:30 **Deborah Delbue:** *Effect of monocytes derived from celiac disease patients on the intestinal barrier function*

10:30 – 11:00 **Danielle Cardoso-Silva:** *Tracking a primary barrier defect in celiac disease*

11:00 – 11:10 **Daphni Siampli:** *Live Cell Imaging of the Par3-mediated epithelial polarity under inflammation*

11:10 – 11:30 Coffee break

Chair: Laura Beier, Danielle Cardoso-Silva

11:30 – 12:00 **Carolin Grünhagen:** *Macromolecule uptake across intestinal epithelia in HIV infection*

12:00 – 12:30 **Murat Seker:** *The role of Cnm2 in the regulation of transepithelial magnesium transport*

12:30 – 13:00 **Janna Leiz:** *Novel transcriptional regulators of tight junction biogenesis in renal collecting ducts*

13:00 – 14:30 Lunch break (13:40 – 14:30 Meeting of the Steering Committee)

Chair: Fábía Lobo de Sá, Praveen Natthamilarasu

14:30 – 14:45 **Eduard Butkevych:** *Epithelial apoptosis and tight junction changes during Campylobacter jejuni infection*

14:45 – 15:00 **Hannah Lutz:** *Effects of HIV-associated inflammatory cytokines on macromolecule translocation across the gut mucosa*

15:00 – 15:15 **Karem Awad:** *Epithelial barrier function in diarrheal and mixed type of irritable bowel syndrome*

15:15 – 16:15 **Lecture 2 by Annette Hammes-Lewin:** *Identification of a new disease relevant sonic hedgehog pathway modifier gene*

16:15 – 17:00 Coffee break

17:00 -18:30 Jens P. Fürste, Campus Tour

19.00 - Dinner in Ristorante Piaggio, Königin-Luise Str. 44, 14195 Berlin