

DFG Research Training Group "TJ-Train", GRK 2318

Tight junctions and their proteins:

molecular features and actions in health and disease

Retreat, September 1 - 3, 2022, Hotel Döllnsee-Schorfheide



September 1, 2022

12:00 – 1:30	Lunch
1:30 – 1:40	Welcome by Jörg Schulzke
1:40 – 2:00	Dorothee Günzel History of Hotel Döllnsee Chair: Lena Voges
2:00 – 3:00	Plenary lecture by Masuo Kondoh Tight junction-targeted drug development: How I met claudins, what we have done, and what we will do Chair: Valerie Masete, Martina Schneemann
3:00 – 3:30	Sher Min Mak Endocytic receptor LRP2: a new role in neural crest cell dynamics
3:30 – 4:00	Lukas Knobe Endoneurial barrier properties and mechanisms of netrin-1 action in in vitro barrier resealing
4:00 – 4:30	Coffee break Chair: Fabián Martínez Perafán
4:30 – 5:00	Rozemarijn van der Veen The role of Occludin in Tight Junction architecture and function
5:00 – 6:30	Pubquiz organized by the students
7:00 – 10:00	Dinner

September 2, 2022

	Chair: Subhakankha Manna, Shuang Cao
8:30 – 9:00	Lena Voges Direct and indirect interaction mechanisms of immune cells and tight junction proteins
9:00 – 9:20	Helena Hader Myrrh mediated protection against IL-13-induced barrier damage
9:20 – 9:40	Lucas Heils Clostridioides difficile toxin effects on the epithelial barrier function
9:40 – 10:10	Martina Schneemann Barrier dysfunction caused by clostridial toxins in intestinal organoid monolayers expressing epithelial sodium channels
10:10 – 10:40	Coffee break

Chair: Helena Hader, Lucas Heils

10:40 – 11:10

Valerie Masete

Investigating macromolecular uptake across the mucosa in HIV infection using human-derived intestinal organoid monolayers

11:10 – 11:40

Violaine Dony

Epithelial barrier function secondary to bacteria-induced polarity defects – mechanism in celiac disease initiation?

11:40 – 12:10

Subhakankha Manna

Role of osteopontin in colitis-associated cancer progression

Photo session in front of the hotel or in the garden

12:30 – 1:30

Lunch

Chair: Violaine Dony

1:30 – 2:30

Plenary lecture by Sina Bartfeld

Infection, innate immune signalling and cancer in the gut - organoids as model

Chair: Sher Min Mak, Fabián Martínez Perafán

2:30 – 3:00

Shuang Cao

Tight junction component-encoding gene regulation in renal collecting duct principal cells

3:00 – 3:30

Amr Al-Shebel

Adaptive changes in the collecting ducts of Cldn10 kidney specific knockout mouse model

3:30 – 4:00

GRK2318, feedback and program for the next year

4:00 – 4:30

Coffee break

4:30 – 6:00

Poster Session

6:00 – 6:30

Meeting of external referees and doctoral students (without PIs)

7:00 – 10:00

Dinner

September 3, 2022

Chair: Amr Al-Shebel

8:30 – 9:30

Plenary lecture by Jens Leipziger

The molecular physiology of renal base excretion

Chair: Rozemarijn Van der Veen, Lukas Knobe

9:30 – 10:00

Fabián Martínez Perafán

Unravelling the mechanism of water and cation permeation through claudin-2 channels by the interaction of claudin-2 with other claudins

10:00 – 10:30

Saeed Khomejani Farahani

Advancing impedance spectroscopy and underlying electrical models to resolve barrier components of simple and stratified epithelia

10:30 – 11:00

Coffee break

11:00 – 12:30

Jens Leipziger and Dorothee Günzel

General discussion

1:00 – 2:00

Lunch

End of the Retreat