

10th SFB35 Symposium 2017

(last update September 11, 2017)

University of Vienna, Waehringer Straße 29, 1090 Vienna



Scientific Program

Wednesday, September 6, 2017

09:00	Registration
11:00	Opening Remarks
11:25	Plenary lecture 1 <i>(Chair: Gaia Novarino, Institute of Science and Technology, Austria)</i>
11:30	Key note: Giulio Superti-Furga (CeMM Research Center for Molecular Medicine of the Austrian Academy of Sciences) <i>Solute carriers, metabolism and drug response: a magic triangle</i>
12:30	Lunch break + Poster Session I
14:45	Session 1: ABC transporters in cancer <i>(Chair: Maria Sibilja, Medical University Vienna, Austria)</i>
14:50	Speaker 1: Gergely Szakacs (Medical University Vienna, Austria) <i>Where and What? The enigmatic ABCB6 transporter</i>
15:15	Speaker 2: Walter Berger (Medical University Vienna, Austria) <i>Cooperation of ABC transporter-dependent and -independent mechanisms in acquired FGFR inhibitor resistance</i>
15:40	Speaker 3: Sven Rottenberg (University Bern, Switzerland) <i>The study of anti-cancer drug resistance in genetically engineered mouse models of BRCA1/2-mutated breast cancer</i>
16:05	Coffee/Tea break
16:35	Session 2: Biophysical approaches in transporter research <i>(Chair: Thomas Stockner, Medical University Vienna, Austria)</i>
16:40	Speaker 1: Gerhard Schütz (Technical University Vienna, Austria) <i>Varying label density to probe membrane protein nanoclusters in superresolution microscopy</i>
17:05	Speaker 2: Ulrik Gether (University of Copenhagen, Denmark) <i>Cholesterol- and neuronal activity-dependent dopamine transporter nanodomains revealed by super-resolution microscopy</i>
17:30	Speaker 3: Peter Hinterdorfer (Johannes Kepler University Linz, Austria) <i>Forces between dopamine transporter (DAT) and its substrates</i>

Thursday, September 7, 2017

08:30 **Registration**

09:00 **ISN-Symposium / Session 3: Structure-Function relationships in neurotransmitter transporters**

supported by:



(Chair: Maarten E.A. Reith, New York University School of Medicine, USA)

09:05 Speaker 1: **Satinder K. Singh** (Yale School of Medicine, USA)

Conformational dynamics of a neurotransmitter:sodium symporter in a lipid bilayer

09:30 Speaker 2: **Hassane Mchaourab** (Vanderbilt University, USA)

Structural and conformational dynamics of an ASD-linked DAT mutant modeled in LeuT

09:55 Speaker 3: **L. Keith Henry** (University of North Dakota, USA)

Molecular switches in the serotonin transporter important for transport of the "ecstasy" (3,4-methylenedioxymethamphetamine)

10:20 **ISN-Symposium Coffee/Tea break**

10:50 **ISN-Symposium / Plenary lecture 2: Structure-Function relationships in neurotransmitter transporters**

supported by:



(Chair: Gerhard Ecker, University of Vienna, Austria)

10:55 Plenary speaker: **Gary Rudnick** (Yale University School of Medicine, USA)

The LeuT structure encodes rules for ion-substrate coupling

11:55 **Lunch & Poster Session II**

14:00 **Session 4: Neurotransmitter transporters**

(Chair: Haley Melikian, University of Massachusetts, USA)

14:10 Speaker 1: **Renaë Ryan** (University of Sydney, Australia)

Structural characterisation reveals insights into substrate recognition by the Glutamine Transporter ASCT2 (SLC1A5)

14:35 Speaker 2: **Sonja Sucic** (Medical University Vienna, Austria)

Rescue of dopamine transporter variants associated with infantile/juvenile parkinsonism by Pharmacochaperoning

15:00 Speaker 3: **Matthäus Willeit** (Medical University Vienna, Austria)

Imaging dopamine-release in first-episode psychosis using [11C]-(+)-PHNO and positron emission tomography: parallels and contrasts to the amphetamine-sensitized state

15:25 **Coffee/Tea break**

15:55 **Session 5: ABC transporters in health and disease**

(Chair: Karl Kuchler, Medical University Vienna, Austria)

16:00 Speaker 1: **Balázs Sarkadi** (Hungarian Academy of Sciences, Hungary)

Clinically relevant mutations in the ABCG2 transporter uncovered by genetic analysis linked to erythrocyte membrane protein expression

16:25 Speaker 2: **Joseph Bryan** (Pacific Northwest Research Institute, USA)

The flip side: what congenital hyperinsulinism and neonatal diabetes tell us about KATP channels

16:50 Speaker 3: **Michael Trauner** (Medical University Vienna, Austria)

Therapeutic modulation of bile acid transport and signaling

17:15 **Plenary lecture 3:**

(Chair: Harald Sitte, Medical University Vienna, Austria)

17:20 Plenary speaker: **Robert Tampé** (Goethe University Frankfurt, Germany)

Let's twist again – Dynamic vignettes of translocation machineries in adaptive immunity

19:00 **Vienna Town Hall - Mayor of Vienna - Rathauskeller**

Friday, September 8, 2017

08:45 **Registration**

09:15 **Session 6: ABC transporters and beyond**

(Chair: Balázs Sarkadi, Hungarian Academy of Sciences, Budapest)

09:20 Speaker 1: **András Váradi** (Institute of Enzymology, RCNS, Hungarian Academy of Sciences)
Preclinical Studies to Prevent Connective Tissue Calcification: Targeting the ABCC6-ENPP1 Network

09:45 Speaker 2: **Bruno Stieger** (University Hospital Zurich, Switzerland)
Canalicular ATP-binding cassette (ABC) transporters and drug-induced cholestasis

10:10 Speaker 3: **Lutz Schmitt** (Heinrich Heine Universität Düsseldorf, Germany)
A quantitative analysis of the HlyA Type 1 Secretion System of E. coli

10:35 **Coffee/Tea break**

11:05 **Session 7: Poster Bullets**

(Chair: Peter Chiba, Medical University Vienna, Austria)

11:10 **5 Poster Award Winners (12' + 3'):**

Eric R. Geertsma (Goethe University Frankfurt, Germany)

PP-14 Structure of a Prokaryotic Fumarate Transporter reveals the Architecture of the SLC26 family

Javier Koh (Duke NUS Medical School, Singapore)

PP-30 Uniquely high and broad ABCB1 expression protects bats from DNA damage

Lisa Konrad (University of Copenhagen, Denmark)

PP-31 The neuropathology of mice expressing two DAT mutations derived from a compound heterozygous patient

Alice Verchere (Weill Cornell Medicine, USA)

PP-68 Light-independent phospholipid scramblase activity of bacteriorhodopsin from Halobacterium salinarum

Julia Preobraschenski (Max Planck Institute for Biophysical Chemistry, Germany)

PP-74 Dual and direction-selective mechanisms of phosphate transport by the vesicular glutamate transporter

12:25 **Lunch**

13:30 **Session 8: Brain transporters: neurons and glia.**

(Chair: Michael Freissmuth, Medical University Vienna, Austria)

13:35 Speaker 1: **Joseph Mindell** (NINDS/NIH, USA)

Protons to Patients: Evaluating the Role of the Chloride Transporter ClC-7 in Lysosomal Function

14:00 Speaker 2: **Paul Gasser** (Marquette University, USA)

Subcellular localization of organic cation transporter 3: Evidence for a role in nuclear adrenergic signaling

14:25 Speaker 3: **Joachim Geyer** (Justus-Liebig-Universität, Germany)

The SLC10 Carrier Family: New Insights into an old carrier family

14:50 **Coffee/Tea break**

15:20 Session 9: Brain and its barrier - imaging approaches

(Chair: Jeffrey D. Rothstein, Johns Hopkins University, USA)

15:25 Speaker 1: **Oliver Langer** (Medical University Vienna, Austria)

Use of PET to study the effect of efflux transporters at the blood-brain barrier on brain distribution of drugs

15:50 Speaker 2: **Paul Lockman** (West Virginia University HSC, USA)

The role of efflux pumps in limiting chemotherapy effectiveness in malignancies of the CNS

16:15 Speaker 3: **Stina Syvänen** (Uppsala University, Sweden)

Active and receptor mediated transport across blood-brain barrier of PET ligands for neuroimaging

16:40 Refreshments

16:50 Plenary lecture 4

(Chair: Claudia Fuchs, Medical University Vienna, Austria)

16:55 Plenary speaker: **Saul Karpen** (Emory University, USA)

Bile Acid-based Therapeutics for Liver and Obesity-related Disorders

17:55 Closing Remarks, End of meeting

19:00 Heuriger Werner Welser