

Scientific Program

9th SFB35-Symposium 2016, Vienna

Wednesday, August 31, 2016

10:00 Registration

10:55 **Opening Remarks** (Harald Sitte, Medical University Vienna)

11:10 Session 1: Neurotransmitter transporters

(Chair: Margaret E. Gnegy, University of Michigan, USA)

11:15 Speaker 1: **Amy Newman** (National Institute of Drug Abuse, USA)
Translating the Atypical Dopamine Uptake Inhibitor Hypothesis from Structure to Function

11:40 Speaker 2: **Gaia Novarino** (Institute of Science and Technology, Austria)
Branched chain amino acid transport at the blood brain barrier: what for?

12:05 Speaker 3: **Harald Sitte** (Medical University Vienna, Austria)
Organic cation transporter 3: An unsuspected player in the actions of psychostimulant drugs

12:30 Lunch / Poster Session I

14:45 Session 2: ABC transporters

(Chair: Balazs Sarkadi, Hungarian Academy of Sciences, Hungary)

14:50 Speaker 1: **Karl Kuchler** (Medical University Vienna, Austria)
A structural model of human ABCG2 suggests a possible mechanism for drug export by a mammalian ABC drug efflux transporters

15:15 Speaker 2: **Kazumitsu Ueda** (Kyoto University, Japan)
Mechanism of action of ABCA1 and ABCB1 (MDR1)

15:40 Speaker 3: **Thomas Stockner** (Medical University of Vienna, Austria)
Do nucleotides control the conformation of the NDB dimer?

16:05 Coffee/Tea break

16:35 Session 3: Regulation of transporters

(Chair: Ulrik Gether, University of Copenhagen, Denmark)

16:40 Speaker 1: **Michael Freissmuth** (Medical University of Vienna, Austria)
Sleepless in Vienna: how to rescue a folding-deficient mutant dopamine transporter of Drosophila melanogaster by pharmacochaperoning

17:05 Speaker 2: **Haley Melikian** (UMASS Medical School, USA)
Dopamine Transporter Trafficking: From Molecules to Behavior

17:30 Speaker 3: **Roxanne Vaughan** (University of North Dakota, USA)
Reciprocal phosphorylation and palmitoylation regulate dopamine transporter kinetics and membrane mobility

17:55 Plenary Lecture 1:

(Chair: Jeffrey Rothstein (Johns Hopkins School of Medicine, USA))

18:00 Plenary Speaker: **Mark. H. Wightman** (University of North Carolina, USA)
Monitoring the dynamics of monoamine transporters

19:30 Reception Townhall of Vienna / Dinner

Thursday, September 1

09:00 **Registration**

09:30 **Session 4: Amino Acid Transport**

(Chair: Dimitrios Fotiadis, University of Bern, Switzerland)

09:35 Speaker 1: **Ellen Closs** (Johannes Gutenberg University Mainz, Germany)

Role of cationic amino acid transporters in human immune and tumor cells

10:00 Speaker 2: **Francois Verrey** (University Zurich, Switzerland)

Transporter cooperation for amino acid homeostasis

10:25 Speaker 3: **Manuel Palacin** (IRB Institute for Research in Biomedicine, Barcelona, Spain)

The structure of Heteromeric Amino acid Transporters: getting there

10:50 **Coffee/Tea break**

11:20 **Plenary lecture 2:**

(Chair: Peter Hinterdorfer, University of Linz, Austria)

11:25 Plenary Speaker: **Randy Blakely** (Vanderbilt Kennedy Center, Nashville, USA)

Rare Opportunities for Progress in the Neurobiology of Attention-Deficit/Hyperactivity Disorder: A Tale of Leaky Dopamine Synapses

12:25 **Lunch / Poster Session II**

14:30 **Session 5: Serotonin transporters and ancestors**

(Chair: Steffen Sinning, Aarhus University, Denmark)

14:35 Speaker 2: **Kristian Strømgaard** (University of Copenhagen, Denmark)

Examining inhibitor and substrate binding to the human serotonin transporter

15:00 Speaker 3: **Claus Loland** (University of Copenhagen, Denmark)

Direct assessment of conformational changes uncovers functional regulation by K⁺ of a neurotransmitter:sodium symporter

15:25 Speaker 1: **Walter Sandtner** (Medical University Vienna, Austria)

Voltage dependent K⁺ binding pushes the catalytic cycle of the human Serotonin transporter into the forward direction

15:50 **Coffee/Tea break**

16:20 **Session 6: Vesicular Transport**

(Chair: Oliver Kudlacek, Medical University Vienna, Austria)

16:25 Speaker 1: **Bruno Giros** (University Quebec, Canada)

Deciphering the Functional role of the Vesicular Monoamine Transporter in defined monoaminergic systems

16:50 Speaker 2: **Christian Piffl** (Medical University Vienna, Austria)

Compromised vesicular dopamine transport activity in Parkinson disease

17:15 Speaker 3: **Gary Miller** (Emory University, USA)

A role for the synaptic glycoprotein 2C (SV2C) in dopamine neurotransmission

17:40 Plenary Lecture 3:

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

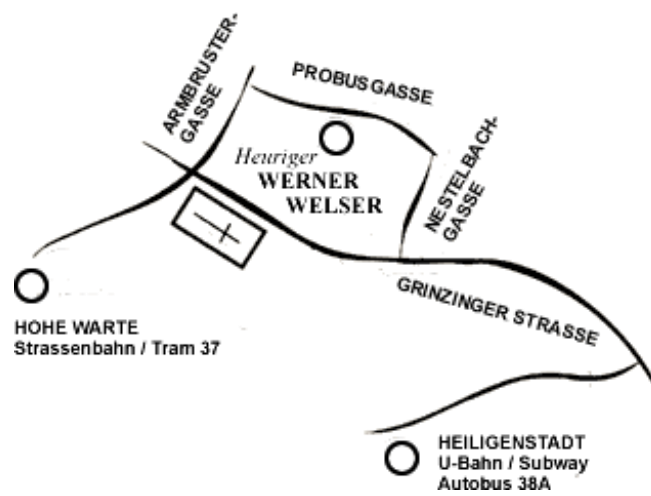
17:45 Plenary Speaker: **Dirk Slotboom** (University of Groningen, Netherlands)

[*Mechanisms of cobalamin uptake*](#)

19:30 Heurigen Restaurant "Ing. Werner Welsch"

Probusgasse 12, 19th district Vienna, Tel: +43 (0) 1 318 97 97

Public transport: Please take tram line 37 from "Schottentor". Get off at the end station "Hohe Warte". 5 minutes walk to Probusgasse.



Friday, September 2

08:30 **Registration**

08:55 **Plenary lecture 4:**

(Chair: Gergely Szakacs, Medical University Vienna, Austria)

09:00 Plenary Speaker: **Michael Gottesman** (National Cancer Inst, Bethesda, USA)
Exploring the Complexity of Multidrug Resistance in Cancer

10:00 **Coffee/Tea break**

10:30 **Session 7: Glycine & Glutamate transporters**

(Chair: Gerhard Schütz, Technical University of Vienna, Austria)

10:35 Speaker 1: **Robert Vandenberg** (University of Sydney, Australia)
An Allosteric Mechanism for Lipid inhibition of Glycine Transporter 2

11:00 Speaker 2: **Olga Boudker** (Cornell University, USA)
Linking structure, dynamics and function in a glutamate transporter homologue

11:25 Speaker 3: **Baruch Kanner** (The Hebrew University of Jerusalem, Israel)
Structure and Function of Excitatory Amino Acid Transporters

11:50 **Session 8: Poster Bullets**

(Chair: Sonja Sucic, Medical University Vienna)

11:55 3 Short Talks of Selected Poster Presenters (12' + 3')

12:40 **Lunch / Poster Session III**

14:05 **Plenary lecture 5:**

(Chair: Gary Rudnick: Yale University, USA)

14:10 Plenary Speaker: **Poul Nissen** (Aarhus University, Denmark)
Completing the NSS transport cycle - structure of an occluded return state of LeuT

14:55 **Session 9: Computational**

(Chair: Ivet Bahar, University of Pittsburgh, USA)

15:00 Speaker 1: **Harel Weinstein** (Cornell University, USA)
Tales of tails and membranes in the dynamics of transporter mechanisms

15:25 Speaker 2: **Gerhard F. Ecker** (Medical University of Vienna, Austria)
The power of linked open data - drug transporter profiling and beyond

15:50 Speaker 3: **Hartmut Luecke** (University of California, USA)
Structure, function, and inhibitors of the acid-gated Helicobacter pylori urea channel, an essential component for acid survival and chronic infection

16:15 **Coffee/Tea break**

16:45 **Plenary lecture 6:**

(Chair: Bruno Stieger, University Hospital Zurich, Switzerland)

16:50 Plenary Speaker: **Piet Borst** (Netherlands Cancer Institute, Netherlands)
Pump and circumstance; drug-transporting ABC-transporters in health and disease

17:50 **Closing Remarks, End of meeting:**

Harald Sitte (Medical University of Vienna, Austria)