

# Scientific Program

## 9<sup>th</sup> 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: Gerhard Schütz, Technical University of Vienna, Austria)*

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

*Mining Immune Serotonin Crosstalk for Insights into Novel Therapeutics in Autism*

**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<sup>+</sup> of a neurotransmitter:sodium symporter*

15:25      Speaker 1: **Peter Hasenhütl** (Medical University Vienna, Austria)

*Voltage dependent K<sup>+</sup> 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 Pifl** (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)

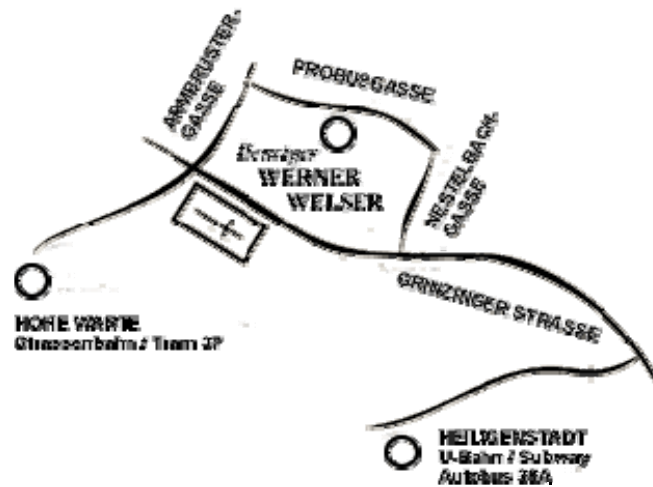
17:45 Plenary Speaker: **Dirk Slotboom** (University of Groningen, Netherlands)

[\*Mechanisms of cobalamin uptake\*](#)

**19:30 Heurigen Restaurant "Ing. Werner Welser"**

Probusgasse 12, 19<sup>th</sup> 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: Elena Bossi, University of Insubria, Italy)*

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)