

BioMedical Transporters 2013 in St. Moritz
"Transporters and Channels in Drug Discovery and Preclinical Development"
Scientific Program

Sunday, August 11, 2013

4:00 - 6:30 pm	Registration
6:00 - 7:45 pm	Cocktail Reception Dinner
7:45 - 9:15 pm	Session 1: Membrane Transporters and Channels in Drug Discovery Chair: Matthias Hediger (Organizer, Director NCCR TransCure, University of Bern, Switzerland)
7:45 - 8:15 pm	Opening & Welcome - Matthias Hediger (Organizer, Director NCCR TransCure, University of Bern, Switzerland)
8:15 - 9:15 pm	Keynote Speaker: Ikumi Tamai (Department of Membrane Transport and Biopharmaceutics, Kanazawa University, Japan) <i>SLC transporters: targets for drug delivery and for chemotherapy</i>

Monday, August 12, 2013

8:30 - 12:30 pm	Session 2: Transporters from a Basic Science Perspective Chair: Matthias Hediger (Organizer, Director NCCR TransCure, University of Bern, Switzerland)
8:30 - 9:05 am	Speaker 1: Robert Tampé (SFB807, Institute of Biochemistry, Biocenter of the Goethe University, Frankfurt, Germany) <i>Transport machineries in adaptive immunity and viral escape strategies</i>
9:05 - 9:40 am	Speaker 2: Donald Hilgemann (Department of Physiology, UT Southwestern Medical Center, Dallas, USA) <i>Sodium transporter turnover driven by palmitoylation under mitochondrial control</i>
9:40 - 10:15 am	Speaker 3: Michael F. Romero (O'Brien Urology Research Center, Mayo Clinic College of Medicine, Rochester, USA) <i>Using a Drosophila model to identify inhibitors of oxalate nephrolithiasis (kidney stones)</i>
10:15 - 10:45 am	Coffee Break
10:45 - 11:20 am	Speaker 4: Daniel Markovich (School of Biomedical Sciences, The University of Queensland, St. Lucia, Australia) <i>Sulfate and oxalate transporters in health and disease</i>
11:20 - 11:55 am	Speaker 5: Akira Kato (Department of Biological Sciences, Tokyo Institute of Technology, Yokohama, Japan) <i>Transporters maintaining the delicate balance between necessity and toxicity of boric acid/borate</i>
11:55 - 12:30 pm	Speaker 6: Harald H. Sitte (SFB35, Center of Physiology and Pharmacology, Medical University, Vienna, Austria) <i>Amphetamine actions at the serotonin transporter rely on the availability of phosphatidylinositol-4,5-bisphosphate</i>
12:30 - 1:45 pm	Lunch
1:45 - 4:05 pm	Session 3: How to Discover New Targets/Ligands: Bioinformatics on Membrane Transporters Chair: Tamas Hegedus (Department of Biophysics and Radiation Biology, Semmelweis University, Budapest, Hungary)
1:45 - 2:20 pm	Speaker 1: Debora Marks (Department of Systems Biology, Harvard Medical School, Boston, USA) and Chris Sander (Computational Biology Program, Memorial Sloan-Kettering Cancer Center, New York, USA) <i>Evolutionary couplings and membrane proteins</i>
2:20 - 2:55 pm	Speaker 2: Jean-Louis Reymond (Deputy Director NCCR TransCure, Department of Chemistry and Biochemistry, University of Bern, Switzerland) <i>Discovery and optimization of small molecule transporter modulators by ligand-based virtual screening of the chemical space</i>
2:55 - 3:30 pm	Speaker 3: David Marcus and Lora Mak (Department of Chemistry, University of Cambridge, UK) <i>The UCC Metrabase - a comprehensive platform for analysis and modelling of small molecule transport</i>
3:30 - 4:05 pm	Speaker 4: Mohan Babu (Department of Biochemistry, University of Regina, Saskatchewan, Canada) <i>Elucidating disease mechanisms: from interactome maps to function</i>
4:05 - 4:30 pm	Coffee Break
4:30 - 5:40 pm	Session 4: Transporters and Drug Safety Chair: Robert Burrier (NCCR TransCure, Stemina Biomarker Discovery, Madison, USA)
4:30 - 5:05 pm	Speaker 1: Birk Poller (Novartis Pharma AG, Basel, Switzerland) <i>Predicting human hepatic clearance from in vitro metabolism and transport data: a new perspective for assessing drug-drug interactions and implementing a compound-class dependent drug development program</i>
5:05 - 5:40 pm	Speaker 2: Yong Huang (Optivia Biotechnology Inc., Menlo Park, USA) <i>In vitro study of drug disposition, excretion and safety in the context of multiple transporters</i>
	Enjoy your evening

Tuesday, August 13, 2013

8:15 - 10:00 am	Session 5: Use of Transporters for Drug Delivery Chair: Ken-ichi Inui (Kyoto Pharmaceutical University, Japan)
8:15 - 8:50 am	Speaker 1: Yoshikatsu Kanai (Department of Pharmacology, Graduate School of Medicine, Osaka University, Japan) <i>Amino acid transporters in cancers for effective and selective delivery of cancer-targeting agents</i>
8:50 - 9:25 am	Speaker 2: David E. Smith (Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor, USA) <i>In vivo and in silico evaluation of PepT1 on the absorption and pharmacokinetics of valacyclovir during dose escalation</i>
9:25 - 10:00 am	Speaker 3: Ikumi Tamai (Department of Membrane Transport and Biopharmaceutics, Kanazawa University, Japan) <i>OATP2B1-mediated drug absorption and its functional characteristics</i>
10:00 - 10:30 am	Coffee Break
10:30 - 12:10 pm	Session 6a: International Young Investigators Session: SFB35 (Austria), NCCR TransCure (Switzerland), SFB807 (Germany) Chair: Harald H. Sitte (SFB35, Center of Physiology and Pharmacology, Medical University, Vienna, Austria)
10:30 - 10:50 am	Speaker 1: Thomas Stockner (SFB35, Center of Physiology and Pharmacology, Medical University of Vienna, Austria) <i>Combining in vitro with in silico studies to obtain insights into substrate transport by the multidrug resistance protein P-glycoprotein</i>
10:50 - 11:10 am	Speaker 2: Benjamin Lüscher (NCCR TransCure, Department of Clinical Research, University of Bern, Switzerland) and Benjamin Cléménçon (NCCR TransCure, Institute of Biochemistry and Molecular Medicine, University of Bern, Switzerland) <i>Regulation of placental glucose transporters: from function to the structure</i>
11:10 - 11:30 am	Speaker 3: Tina Zollmann (SFB807, Institute of Biochemistry, Biocenter of the Goethe University, Frankfurt, Germany) <i>Deciphering the molecular mechanism of the human lysosomal ABC transporter TAPL by fluorescence anisotropy and dual-color fluorescence burst analysis on single liposome level</i>
11:30 - 11:50 am	Speaker 4: Sonja Susic (SFB35, Center of Physiology and Pharmacology, Medical University of Vienna, Austria) <i>ER export of monoamine neurotransmitter transporters</i>
11:50 - 12:10 pm	Speaker 5: Christine Deisl (NCCR TransCure, Institute of Biochemistry and Molecular Medicine, University of Bern, Switzerland) <i>The sodium/hydrogen exchanger NHA2 is critical for insulin secretion in β-cells</i>
12:10- 1:30 pm	Lunch
1:30 - 2:50 pm	Session 6b: International Young Investigators Session: SFB35 (Austria), NCCR TransCure (Switzerland), SFB807 (Germany) Chair: Robert Tampé (SFB807, Institute of Biochemistry, Biocenter of the Goethe University, Frankfurt, Germany)
1:30 - 1:50 pm	Speaker 6: Camilo Perez (SFB807, Department of Structural Biology, Max Planck Institute of Biophysics, Frankfurt, Germany) <i>K⁺-dependent activity modulation of the Na⁺-coupled betaine symporter BetP</i>
1:50 - 2:10 pm	Speaker 7: Claudia Fuchs (SFB35, Department of Internal Medicine III, Medical University of Vienna, Austria) <i>Intrahepatic changes in bile acid composition protects BSEP (ABCB11) KO mice from hepatic inflammation in methionine choline-deficient diet induced NASH</i>
2:10 - 2:30 pm	Speaker 8: Andrea Chicca (NCCR TransCure, Institute of Biochemistry and Molecular Medicine, University of Bern, Switzerland) <i>Modulation of endocannabinoid membrane trafficking: Towards a novel pharmacological target</i>
2:30 - 2:50 pm	Speaker 9: Christian Bamann (SFB807, Department of Biophysical Chemistry, Max Planck Institute of Biophysics, Frankfurt, Germany) <i>Encoding the light sensitivity in channelrhodopsin-2</i>
2:50 - 3:15 pm	Coffee Break
3:40 - 11:00 pm	Special Excursion - Going up to the Piz Corvatsch (3'303 m.a.s.l.) with a unique view of the mountains and lakes of the Upper Engadin valley and far beyond

Wednesday, August 14, 2013

8:15 - 10:35 am	Session 7: Structure, Function and Imaging of Transporters Chair: Kaspar Locher (NCCR TransCure, Institute of Molecular Biology and Biophysics, ETH Zurich, Switzerland)
8:15 - 8:50 am	Speaker 1: Nieng Yan (School of Medicine, Tsinghua University, Beijing, China) <i>Structural and mechanistic investigation of Xyle, an E.coli homologue of GLUT1-4</i>
8:50 - 9:25 am	Speaker 2: Rachelle Gaudet (Department of Molecular and Cellular Biology, Harvard University, Cambridge, USA) <i>Structural insights into TRPV channel function in health and disease</i>
9:25 - 10:00 am	Speaker 3: Roger Dawson (Pharma Research & Early Development, F. Hoffmann-La Roche AG, Basel, Switzerland) <i>Acid sensing ion channels from a drug discovery perspective</i>
10:00 - 10:35 am	Speaker 4: Christine Ziegler (Department of Structural Biology, Max Planck Institute of Biophysics, Frankfurt, Germany) <i>Role of substrate coupling in the regulated betaine transporter BetP</i>
10:35 - 11:00 am	Coffee Break
11:00 - 1:05 pm	Session 8: Transporters of the Intestine, Liver and Kidney Chair: Peter Meier-Abt (President Swiss Academy of Medical Sciences (SAMS), University of Basel, Switzerland)
11:00 - 11:25 am	Speaker 1: Meenakshisundaram Ananthanarayanan (Department of Pediatrics, Mount Sinai School of Medicine, New York, USA) <i>The role of microRNAs in the expression of bile salt transporters</i>
11:25 - 11:50 am	Speaker 2: Stephan Urban (Department of Infectious Diseases, University Hospital, Heidelberg, Germany) <i>The role of SLC10A1/NTCP as a specific receptor of human hepatitis B virus (HBV)</i>
11:50 - 12:15 pm	Speaker 3: James L. Boyer (Department of Medicine, Yale University, New Haven, USA) <i>Mechanism of regulation of human MDR3/ABCB4 by PPARα - implications for treatment of cholestatic liver disease</i>
12:15 - 12:40 pm	Speaker 4: Tappei Takada (Department of Pharmacy, University of Tokyo Hospital, Tokyo, Japan) <i>ABCG2/BCRP dysfunction as a major risk factor of gout</i>
12:40 - 1:05 pm	Speaker 5: Bruno Vogt (Department of Nephrology and Hypertension, University Hospital, Bern, Switzerland) <i>The renal site of sodium retention in cirrhosis</i>
1:05 - 2:30 pm	Lunch
2:30 - 6:00 pm	Enjoy your free afternoon
6:00 - 9:00 pm	Session 9: Poster Session with Drinks & Regional Specialities Chair: Robert Burrier (NCCR TransCure, Stemina Biomarker Discovery, Madison, USA)

Thursday, August 15, 2013

8:15 - 10:20 am	Session 10: Systems Biology and Transporters Chair: Bruno Stieger (NCCR TransCure, Clinical Pharmacology and Toxicology, University Hospital Zurich, Switzerland)
8:15 - 8:50 am	Speaker 1: Kathleen Giacomini (Department of Bioengineering and Therapeutic Sciences, University of California, San Francisco, USA) <i>Genomewide and transporterome-wide discovery of uric acid transporters and their regulatory mechanisms</i>
8:50 - 9:25 am	Speaker 2: Svetlana Lutsenko (Department of Physiology, Johns Hopkins University, Baltimore, USA) <i>New metabolic connections and inter-tissue cross-talk in Wilson's disease</i>
9:25 - 10:00 am	Speaker 3: Anne Nies (Dr. Margarete Fischer-Bosch-Institute of Clinical Pharmacology, Stuttgart, Germany) <i>Pharmacogenomics of organic anion transporting polypeptides (OATPs)</i>
10:00 - 10:20 am	Speaker 4: Sibylle Neuhoff (Simcyp Limited, Blades Enterprise Centre, Sheffield, UK) <i>PBPK-modeling as tool for in vitro-in vivo extrapolation of renal transporters</i>
10:20- 10:45 am	Coffee Break
10:45 - 12:30 pm	Session 11: Downstream of Transporters: Second Messengers/Signalling Pathways Chair: Dallas Bednarczyk (Novartis Institutes for Biomedical Research, Cambridge, USA)
10:45 - 11:20 am	Speaker 1: Shmuel Muallem (National Institutes of Health / NIDCR, Bethesda, USA) <i>IRBIT, a third messenger that integrates and synergizes the Ca²⁺ and cAMP signaling in epithelial transport</i>
11:20 - 11:55 am	Speaker 2: Henriette Meyer zu Schwabedissen (Department of Pharmaceutical Sciences, University of Basel, Switzerland) <i>Efavirenz a compartment specific CAR inducer - results from an in vivo study</i>
11:55 - 12:30 pm	Speaker 3: Leon Murphy (Novartis Institutes for Biomedical Research, Cambridge, USA) <i>Amino acid transport mechanisms that regulate cell growth via the TOR pathway</i>
12:30- 12:45 pm	Poster awards
12:45 - 2:00 pm	Lunch
2:00 - 3:45 pm	Session 12: Transporters and Cancer Chair: Roch-Philippe Charles (NCCR TransCure, Institute of Biochemistry and Molecular Medicine, University of Bern, Switzerland)
2:00 - 2:35 pm	Speaker 1: Karl Kunzelmann (Department of Physiology, University of Regensburg, Germany) <i>Role of anoctamins in cancer and apoptosis</i>
2:35 - 3:10 pm	Speaker 2: Stephan J. Reshkin (Department of General and Environmental Physiology, University of Bari, Italy) <i>The Na⁺/H⁺ exchanger (NHE1) as a new regulatory target for combination therapy in pancreatic ductal adenocarcinoma (PDAC)</i>
3:10 - 3:45 pm	Speaker 3: Marco Falasca (Blizard Institute, Barts and The London School of Medicine and Dentistry, London, UK) <i>Emerging role of ABC transporters in cancer signalling</i>
3:45 pm	Closing remarks - Matthias Hediger (Organizer, Director NCCR TransCure, University of Bern, Switzerland)
4:00 - 4:30 pm	Coffee Break
6:30 - 11:00 pm	Special Farewell Dinner at Hotel Waldhaus am See, St. Moritz