

**BioMedical Transporters 2011**  
**"Membrane Transporters in Drug Discovery"**  
**Scientific Program**



**Sunday, August 7, 2011**

4:00 - 6:30 pm	Registration
6:00 - 7:45 pm	Cocktail Reception Dinner
7:45 - 9:00 pm	<b>Session 1: Membrane Transporters in Drug Discovery: from different points of view</b> <b>Chair: Matthias Hediger (Institute of Biochemistry and Molecular Medicine, University of Bern / Director NCCR TransCure)</b>
7:45 - 8:10 pm	<b>Opening &amp; Welcome - Matthias Hediger (Organizer, Director NCCR TransCure)</b>
8:10 - 9:00 pm	<b>Keynote Speaker: Martin Gosling (Novartis Institutes for Biomedical Research, Horsham, UK)</b> <i>Ion channel modulation, a therapeutic approach for respiratory diseases?</i>

**Monday, August 8, 2011**

8:30 - 9:40 am	<b>Session 2: How to discover new ligands: Computer-based Virtual Screening</b> <b>Chairs: Jean-Louis Reymond, Martin Lochner (Dept. of Chemistry and Biochemistry, University of Bern / NCCR TransCure)</b>
8:30 - 9:05 am	<b>Speaker 1: Daniel Bertrand (HiQScreen, Geneva)</b> <i>The importance of functional screening in drug discovery</i>
9:05 - 9:40 am	<b>Speaker 2: Jean-Louis Reymond (Dept. of Chemistry and Biochemistry, University of Bern / Deputy Director NCCR TransCure)</b> <i>Screening the chemical space for new drugs</i>
9:40 - 10:10 am	Coffee Break
10:10 - 12:30 pm	<b>Session 3: Novel Compound Screening and Drug Profiling Technologies</b> <b>Chairs: Hugues Abriel (Department of Clinical Research, University of Bern / NCCR TransCure), Jürg Gertsch (Institute of Biochemistry and Molecular Medicine, University of Bern / NCCR TransCure)</b>
10:10 - 10:45 am	<b>Speaker 1: Jürgen Reinhardt (Novartis, Basel)</b> <i>Early lead finding for ion channel and transporter targets: Examples from high throughput screening</i>
10:45 - 11:20 am	<b>Speaker 2: Andrea Brüggemann (Nanion Technologies GmbH, München)</b> <i>Chips go deeper: New possibilities of ion channel screening including organelles</i>
11:20 - 11:55 am	<b>Speaker 3: Ralf Kettenhofen (Axiogenesis AG, Köln)</b> <i>Pluripotent stem cell-derived cardiomyocytes: A new and predictive tool in ion channel science</i>
11:55 - 12:30 pm	<b>Speaker 4: Tobias Dietschy (Dualsystems Biotech AG, Schlieren)</b> <i>From target identification to drug profiling - an integrated workflow to determine protein-protein interactions and compound profiles proteome-wide</i>
12:30 - 1:45 pm	Lunch
1:45 - 5:00 pm	<b>Session 4: Transporters as Drug Targets: ADME and Toxicology Questions</b> <b>Chairs: Robert Burrier (Stemina Biomarker Discovery, Madison, WI / NCCR TransCure), Stephen Hess (Millipore Corporation, St. Charles, MO)</b>
1:45 - 2:20 pm	<b>Speaker 1: Yuichi Sugiyama (Department of Molecular Pharmacokinetics, University of Tokyo)</b> <i>Transporters on the target organs and clearance organs are responsible for drug induced toxicities</i>
2:20 - 2:55 pm	<b>Speaker 2: Dallas Bednarczyk (Novartis, NIBR, Cambridge, MA)</b> <i>Rational use of transporter assays in drug discovery</i>
2:55 - 3:30 pm	<b>Speaker 3: Leslie Benet (University of California, San Francisco, CA)</b> <i>Understanding and predicting transporter-enzyme interplay in the intestine and liver</i>
3:30 - 3:50 pm	Coffee Break
3:50 - 4:25 pm	<b>Speaker 4: Jash Unadkat (University of Washington, Seattle, WA)</b> <i>Predicting and understanding drug-drug interactions</i>
4:25 - 5:00 pm	<b>Speaker 5: Gail Robertson (University of Wisconsin, Madison, WI)</b> <i>hERG subunit composition: Implications for safety screening</i>
	Enjoy your evening

Tuesday, August 9, 2011

8:15 - 11:15 am	<b>Session 5: Trending Transporter Targets in Drug Discovery</b> <b>Chairs: Dallas Bednarczyk (Novartis, NIBR, Cambridge, MA), Scott Landfear (Molecular Microbiology &amp; Immunology, Oregon Health Sciences University, Portland, OR)</b>
8:15 - 8:50 am	<b>Speaker 1: Scott Landfear (Molecular Microbiology &amp; Immunology, Oregon Health Sciences University, Portland, OR)</b> <i>Hexose transporters in the protozoan parasite Leishmania mexicana: roles in parasite viability and pathogenesis</i>
8:50 - 9:25 am	<b>Speaker 2: Manuel Palacin (Institute for Research in Biomedicine, University of Barcelona, Spain)</b> <i>Molecular basis of substrate-induced permeation by the arginine/agmatine antiporter AdiC of the arginine-dependent acid resistance system of E. Coli</i>
9:25 - 9:45 am	<b>Coffee Break</b>
9:45 - 10:20 am	<b>Speaker 3: I. David Goldman (Albert Einstein College of Medicine of Yeshiva University, Bronx, NY)</b> <i>Update on the folate transporters and their physiological and pharmacological roles</i>
10:20 - 10:45 am	<b>Short presentation 1: Olga Lomovskaya (Mpx Pharmaceuticals, San Diego, CA)</b> <i>Inhibitors of MDR pumps from gram-negative bacteria: from tools to drugs</i>
10:45 - 11:15 am	<b>Short presentation 2: Jeffrey Noebels (Baylor College of Medicine, Houston, TX)</b> <i>UnZIPPING zinc in the brain: inward zinc ZIP transporters as novel targets for neuroprotection</i>
11:15- 12:30 pm	<b>Lunch</b>
12:30 - 2:55 pm	<b>Session 6: PET Imaging: study transporters in vivo</b> <b>Chair: Bruno Stieger (Division of Clinical Pharmacology and Toxicology, University Hospital, Zurich / NCCR TransCure)</b>
12:30 - 1:05 pm	<b>Speaker 1: Yuichi Sugiyama (Department of Molecular Pharmacokinetics, University of Tokyo)</b> <i>Use of microdosing clinical study: Quantitative prediction of transporter-mediated clearance and distribution of drugs with PET imaging</i>
1:05 - 1:40 pm	<b>Speaker 2: Tetsuya Terasaki (Department of Biochemical Pharmacology and Therapeutics, Tohoku University, Japan)</b> <i>Prediction of in vivo drug distribution based on the quantitative transporter protein analysis</i>
1:40 - 2:00 pm	<b>Coffee Break</b>
2:00 - 2:35 pm	<b>Speaker 3: Oliver Langer (Medical University of Vienna)</b> <i>In vivo imaging of ABC transporters with positron emission tomography (PET)</i>
2:35 - 2:55 pm	<b>Short presentation: Volker Gekeler (Bayer Healthcare, Berlin)</b> <i>BAY 94-9392: A F-18 labeled L-glutamate derivative for specific PET imaging of system xC- in tumors</i>
4:00 - 11:00 pm	<b>Special Excursion - Going up to the Männlichen/Kleine Scheidegg. Dinner included.</b>

Wednesday, August 10, 2011

8:30 - 11:50 am	<b>Session 7: Structural Biology in Drug Discovery</b> <b>Chair: Raimund Dutzler (Department of Biochemistry, University of Zurich / NCCR TransCure)</b>
8:30 - 9:05 am	<b>Speaker 1: Ming Zhou (Department of Physiology, Columbia University, New York, NY)</b> <i>Modulation of voltage-dependent Kv1 channels by small organic compounds</i>
9:05 - 9:40 am	<b>Speaker 2: Frances Ashcroft (Department of Physiology, University of Oxford, UK)</b> <i>New uses of old drugs: targeting gain-of-function mutations in KATP channels</i>
9:40 - 10:15 am	<b>Coffee Break</b>
10:15 - 10:50 am	<b>Speaker 3: Dirk Trauner (Department of Chemistry and Biochemistry, Ludwig-Maximilians-University, Munich)</b> <i>Development of light-activated ion channels and GPCRs</i>
10:50 - 11:10 am	<b>Short presentation 1: Dimitrios Fotiadis (Institute of Biochemistry and Molecular Medicine, University of Bern / NCCR TransCure)</b> <i>Frog oocytes to unveil the structure and supramolecular organization of human transport proteins</i>
11:10 - 11:30 am	<b>Short presentation 2: Markus Seeger (Department of Biochemistry, University of Zurich)</b> <i>Crystal structure of a heterodimeric ABC transporter in its inward-facing conformation</i>
11:30 - 11:50 am	<b>Short presentation 3: Carlo Bertozzi (Department of Biochemistry, University of Zurich)</b> <i>Structural basis of open channel block in a prokaryotic pentameric ligand-gated ion channel</i>
11:50 - 1:00 pm	<b>Lunch</b>
1:00 - 5:00 pm	<b>Session 8: Transporters of the Intestine, Liver and Kidney</b> <b>Chair: Robert Dobbins (GlaxoSmithKline, Discovery Medicine - Metabolic Diseases, Research Triangle Park, NC)</b>
1:00 - 1:35 pm	<b>Speaker 1: Robert Dobbins (GlaxoSmithKline, Discovery Medicine - Metabolic Diseases, Research Triangle Park, NC)</b> <i>Gastrointestinal nutrient transporters as therapeutic targets (ASBT/iBAT and SGLT1)</i>
1:35 - 2:10 pm	<b>Speaker 2: Bruno Hagenbuch (The University of Kansas Medical Center, Kansas City, KS)</b> <i>Drug transport by OATP1B1 and 1B3</i>
2:10 - 2:45 pm	<b>Speaker 3: Hans Lennernas (Uppsala University, Uppsala)</b> <i>Rosuvastatin (OATP1B1 and B3), Repaglinide</i>
2:45 - 3:10 pm	<b>Coffee Break</b>
3:10 - 3:45 pm	<b>Speaker 4: Heini Murer and Jürg Biber (Institute of Physiology, University of Zurich)</b> <i>Update on phosphate transporters</i>
3:45 - 4:20 pm	<b>Speaker 5: Matthijs Becker (Department of Epidemiology, Erasmus MC, Rotterdam, NL)</b> <i>Drug transporters from a pharmacogenetic point of view</i>
4:20 - 4:40 pm	<b>Short presentation 1: Ryan Morgan (Discovery Toxicology, Amgen, Newbury Park, CA)</b> <i>Hepatobiliary transporters in drug safety assessment</i>
4:40 - 5:00 pm	<b>Short presentation 2: Reinhart Reithmeier (Department of Biochemistry, University of Toronto, Canada)</b> <i>Correcting trafficking defects in the kidney anion exchanger 1 (kAE1)</i>
5:30 - 8:00 pm	<b>Session 9: Poster session with drinks &amp; Mexican appetizers</b> <b>Chair: Susanne Bentz (Institute of Biochemistry and Molecular Medicine, University of Bern / NCCR TransCure)</b>

Thursday, August 11, 2011

8:15 - 8:55 am	<b>Special lecture:</b> Karl-Heinz Altmann (Department of Chemistry and Applied Biosciences, ETH Zurich / NCCR TransCure) <i>Lead finding in drug discovery</i>
8:55 - 11:35 am	<b>Session 10: Blood Brain Barrier</b> <b>Chair:</b> Yuichi Sugiyama (Department of Molecular Pharmacokinetics, University of Tokyo)
8:55 - 9:30 am	<b>Speaker 1: Hiroyuki Kusuhara (University of Tokyo)</b> <i>Quantitative evaluation of the impact of active efflux by P-gp and Bcrp at the BBB on the predictability of the unbound concentrations of drugs in the brain using cerebrospinal fluid concentration as surrogate</i>
9:30 - 9:50 am	<b>Coffee Break</b>
9:50 - 10:25 am	<b>Speaker 2: Margareta Hammarlund-Udenaes (Department of Pharmaceutical Biosciences, University of Uppsala, Sweden)</b> <i>Transporter influence on brain drug delivery - principles and observations from in vivo studies</i>
10:25 - 11:00 am	<b>Speaker 3: Zack Cheng (GlaxoSmithKline R&amp;D, Shanghai, China)</b> <i>Blood-Brain Barrier transporters: friend or enemy for CNS drug discovery and development</i>
11:00 - 11:35 am	<b>Short presentation: Li Di (Pfizer Inc., Groton, CT)</b> <i>Integrated approaches to blood brain barrier in CNS drug discovery</i>
11:35 - 11:45 am	<b>Poster awards</b>
11:45 - 12:45 pm	<b>Lunch</b>
12:45 - 4:10 pm	<b>Session 11: Transporters used for Drug Delivery</b> <b>Chairs:</b> Ken-ichi Inui (Kyoto Pharmaceutical University)
12:45 - 1:20 pm	<b>Speaker 1: Atsushi Yonezawa (Kyoto University Hospital)</b> <i>Drug disposition via organic cation transporters (OCT and MATE) in the kidney</i>
1:20 - 1:55 pm	<b>Speaker 2: Bo Feng (Pfizer Inc., East Lyme, CT)</b> <i>Assessment of transporter-mediated DDIs in drug discovery and development</i>
1:55 - 2:20 pm	<b>Coffee Break</b>
2:20 - 2:55 pm	<b>Speaker 3: David E. Smith (University of Michigan, Ann Arbor, MI)</b> <i>Impact of PEPT1 and PEPT2 in drug delivery</i>
2:55 - 3:30 pm	<b>Speaker 4: Peter Swaan (University of Maryland, Baltimore, MD)</b> <i>Use of bile acid transporters for drug delivery</i>
3:30 - 3:50 pm	<b>Short presentation 1: Walter Jäger (University of Vienna)</b> <i>Expression of organic anion-transporting polypeptides (OATP) 1B1 and 1B3 in ovarian cancer cells: relevance for paclitaxel transport</i>
3:50 - 4:10 pm	<b>Short presentation 2: Patrik Lundquist (AstraZeneca, Södertälje, Sweden )</b> <i>Cytochrome P450 inhibitory properties of common efflux transporter inhibitors</i>
4:10 pm	<b>Closing remarks</b>
6:00 - 10:00 pm	<b>Special farewell dinner at Barry's Restaurant, Hotel Eiger, Grindelwald</b>