

**BioMedical Transporters 2009 - Scientific Program**  
as per August 3, 2009



**Sunday, August 9, 2009**

4:00 - 6:30 pm	Registration
6:00 - 7:45 pm	Cocktail Reception Dinner
7:45 - 8:00 pm	Opening & Welcome - Matthias Hediger, Organizer
8:00 - 10:00 pm	<b>Session 1. Na/coupled glucose transport</b> Chair: Matthias Hediger
8:00- 9:00 pm	<b>Keynote Speaker</b> Ernest M Wright (UCLA, Los Angeles, USA) <i>The Biology of Na/Glucose transporters (SGLTs)</i>
9:00 - 9:45 pm	<b>Robert L Dobbins (GlaxoSmithKline, Inc., Research Triangle Park, NC, USA)</b> <i>Clinical application of SGLT2 inhibitors in type 2 diabetes mellitus</i>
9:45 - 10:00 pm	<b>Aouatef Bellamine (Bristol-Myers Squibb, Research and Development, Princeton, NJ, USA)</b> <i>Dapagliflozin is a potent, competitive, selective and reversible inhibitor of human SGLT2</i>

**Monday, August 10, 2009**

8:15 - 12:00 am	<b>Session 2. The GLUT (SLC2) family</b> Chair: Bernard Thorens
8:15 - 8:55 am	<b>Mike Mueckler (Washington University Medical School, Department of Cell Biology and Physiology, St. Louis, MO, USA)</b> <i>Structure and Function Analysis of Mammalian Glucose Transporters</i>
8:55 - 9:35 am	<b>Samuel Cushman (National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, USA)</b> <i>Clustering of GLUT4 Molecules in the Plasma Membrane of Primary Adipose Cells as a Key Recycling Intermediate</i>
9:35 - 10:15 am	<b>Bernard Thorens (University of Lausanne, Switzerland)</b> <i>GLUT2 and GLUT9</i>
10:15 - 10:45 am	Coffee Break
10:45 - 11:25 am	<b>Wolf B. Frommer (Carnegie Institution for Science, Stanford, CA, USA)</b> <i>FRET sugar sensors for the identification of novel sugar transporters and their regulators</i>
11:25 - 12:00 am	<b>Hiroataka Matsuo (National Defense Medical College, Saitama, Japan)</b> <i>Mutations in GLUT9 result in renal hypouricemia</i>
12:00 - 1:30 pm	Lunch
1:30 - 6:00 pm	<b>Session 3. Structure, molecular dynamics and assembly of channels and transport proteins</b> Chair: Dimitrios Fotiadis (IBMM Bern)
1:30 - 2:10 pm	<b>Peter Henderson (University of Leeds, Institute of Membrane and Systems Biology, Leeds, UK)</b> <i>Structures of the Mhp1 hydantoin transport protein and its relatives</i>
2:10 - 2:50 pm	<b>Chayne Piscitelli (Oregon Health and Science University, Vollum Institute, Portland, OR, USA)</b> <i>One fold for many functions: a common architecture unifies diverse secondary transporter familie</i>
2:50 - 3:20 pm	Coffee Break
3:20 - 4:00 pm	<b>Thomas Walz (Harvard Medical School, Boston, MA, USA)</b> <i>Lipid-protein interactions in double-layered 2D crystals of aquaporin-0</i>
4:00 - 4:40 pm	<b>Bert de Groot (Max Planck Institute, Computational biomolecular dynamics group, Göttingen, Germany)</b> <i>Permeation and inhibition mechanisms in water and ion channels</i>
4:40 - 5:05 pm	<b>Edmund R.S. Kunji (Medical Research Council, Cambridge, United Kingdom)</b> <i>The transport mechanism of mitochondrial carriers</i>
5:05 - 5:45 pm	<b>Andreas Kuhn (University of Hohenheim, Institute of Microbiology and Molecular Biology, Stuttgart)</b> <i>The membrane insertase YidC is essential for the assembly of membrane protein</i>
Evening	No events scheduled - Enjoy the old city of Thun

Tuesday, August 11, 2009

<b>8:15 - 12:00 am</b>	<b>Session 4. SLC and ABC Transporters</b> <b>Chairs: Yoshikatsu Kanai and John Rasko</b>
8:15 - 8:55 am	<b>Randy Blakely (Vanderbilt University School of Medicine, Nashville, TN, USA)</b> <i>ADHD Medications and the Dopamine Transporter: Have We Got it Backwards?</i>
8:55 - 9:35 am	<b>Donald Hilgemann (UT Southwestern, Dallas, TX, USA)</b> <i>Massive Endocytosis Activated by Calcium and Pro-apoptotic Processes in Non-Neuronal Cells</i>
9:35 - 10:05 am	<b>Coffee Break</b>
10:05 - 10:45 am	<b>John Rasko (Royal Prince Alfred Hospital, Newtown, Australia)</b> <i>Genetic defects of amino acid transporters (iminoglycinuria, hyperglycinuria, Hartnup Disease)</i>
10:45 - 11:25 am	<b>Manuel Palacin (Institute for Research in Biomedicine IRB, Barcelona, Spain)</b> <i>Heteromeric Amino acid Transporters: Physiology, pathology and structure</i>
11:25 - 12:05 am	<b>Naohiko Anzai (Department of Pharmacology and Toxicology, Kyorin University School of Medicine, Tokyo, Japan)</b> <i>Developing new medicines by targeting membrane transporters</i>
<b>12:10 - 1:40 pm</b>	<b>Lunch</b>
<b>1:40 - 6:00 pm</b>	<b>Session 5. Folate transporters: physiological and pharmacological roles</b> <b>Chairs: I. David Goldman and Philip Low</b>
1:40 - 1:50 pm	<b>Introduction</b>
1:50 - 2:30 pm	<b>Larry Matherly (Karmanos Cancer Center, Wayne State University, Detroit, MI, USA)</b> <i>The reduced folate carrier (SLC19A1)-structure, regulation, and clinical applications</i>
2:30 - 3:10 pm	<b>I. David Goldman (Albert Einstein College of Medicine, Bronx, NY, USA)</b> <i>The physiological and pharmacological roles of the proton-coupled folate transporter (PCFT-SLC46A1)</i>
<b>3:10 - 3:50 pm</b>	<b>Philip Low (Purdue University, West Lafayette, IN, USA)</b> <i>Folate Receptor-Mediated Delivery of Imaging and Therapeutic Agents to Pathologic Cells and Tissues</i>
3:50 - 4:20 pm	<b>Coffee Break</b>
4:20 - 5:00 pm	<b>Ann Jackman (Institute of Cancer Research, Surrey, London, UK)</b> <i>Exploiting the folate transporter for selective tumor delivery of novel antifolate drugs</i>
5:00 - 5:40 pm	<b>Richard Moran (Virginia Commonwealth University, Richmond, VA, USA)</b> <i>Transport of folates across the inner mitochondrial membrane</i>
<b>6:00 - 11:00 pm</b>	<b>Special Excursion to the Niesen Mountain. Enjoy dinner with spectacular views of the snow-capped Swiss mountains (sunset at 8:53 pm).</b>

Wednesday, August 12, 2009

<b>8:30 - 11:30 am</b>	<b>Session 6. SLC drug transporters: From physiology to diseases and toxicity</b> <b>Chairs: Ken-ichi Inui and David E. Smith</b>
8:30 - 9:10 am	<b>David E. Smith (College of Pharmacy, University of Michigan, Ann Arbor, MI, USA)</b> <i>Significance of PEPT1 and PEPT2 in Drug Absorption, Disposition and Dynamics: Lessons Learned from Genetically Modified Mice</i>
9:10 - 9:50 am	<b>Douglas H. Sweet (Virginia Commonwealth University, Richmond, VA, USA)</b> <i>Impact of Oat1 and Oat3 on drug disposition: Lessons learned from knockout mic</i>
9:50 - 10:20 am	<b>Coffee Break</b>
10:20 - 11:00 am	<b>Ken-ichi Inui (Kyoto University Hospital, Japan)</b> <i>Cooperation of OCTs and MATEs in drug disposition</i>
11:00 - 11:40 am	<b>Yuichi Sugiyama (University of Tokyo, Graduate School of Pharmaceutical Sciences, Tokyo, Japan)</b> <i>Clinical significance of pharmacogenomics and drug-drug interaction in OATPs-mediated pharmacokinetics/pharmacodynamic</i>
<b>11:40 - 13:00 am</b>	<b>Session 7. Metabolomics</b> <b>Chairs: Yoshikatsu Kanai and Yukio Kato</b>
11:40 - 12:20 am	<b>Yoshikatsu Kanai (Osaka, Japan)</b> <i>Metabolomics approaches to orphan transporters</i>
12:20 - 13:00 am	<b>Yukio Kato and Akira Tsuji (Kanazawa University, Faculty of Pharmacy, Kakuma-machi, Kanazawa, Japan)</b> <i>In vivo substrates of OCTN1 identified by CE/TOFMS metabolomics</i>
<b>13:00 - 2:30 pm</b>	<b>Lunch</b>
<b>2:30 - 2:50 pm</b>	<b>Session 7 continued</b>
2:30 - 2:50 pm	<b>Daniel Markovich (The University of Queensland, School of Biomedical Sciences, Brisbane, Australia)</b> <i>Anion transporters and their insights into pathophysiology using KO mice</i>
<b>2:50 - 6:00 pm</b>	<b>Session 8. Tight Junctions: Basic biology, clinical relevance and pharmaceutical target</b> <b>Chair: Klaus W. Beyenbach</b>
2:50 - 3:30 pm	<b>Dorothee Günzel (Institute of Clinical Physiology, Charité Campus Benjamin Franklin, Berlin, Germany)</b> <i>Tight junctions: From lab bench to bedside</i>
3:30 - 4:10 pm	<b>Ingolf Blasig (Leibniz-Institute of Molecular Pharmacology, Berlin-Buch, Germany)</b> <i>Tight junction - condition precedent to transport processes at tissue barriers</i>
4:10 - 4:40 pm	<b>Coffee Break</b>
4:40 - 5:20 pm	<b>Jörg-Dieter Schulzke (Department of General Medicine, Charité Campus Benjamin Franklin, Berlin, Germany)</b> <i>Barrier-protective drugs in diseases of the small and large intestine</i>
5:20 - 6:00 pm	<b>Alessio Fasano (Mucosal Biology Research Center, University of Maryland School of Medicine, Baltimore, MD, USA)</b> <i>Dynamic Regulation of Passage Through Tight Junctions: Significance for Drug Delivery</i>
<b>6:00 - 8:00 pm</b>	<b>Session 9. Wine and cheese apéro and poster session (Katrin Bolanz, Bern)</b>

Thursday, August 13, 2009

<b>8:15 - 11:30 am</b>	<b>Session 10. Lipid Transport</b> <b>Chairs: Bruno Stieger and Christiane Albrecht</b>
8:15 - 8:55 am	<b>Albert K Groen (Academic Medical Center, University of Amsterdam, The Netherlands)</b> <i>Transintestinal lipid secretion: A novel mechanism to regulate cholesterol homeostasis</i>
8:55 - 9:35 am	<b>Ronald Oude Elferink (Academic Medical Center University of Amsterdam, The Netherlands)</b> <i>Cooperativity of the floppase ABCB4 and the flippase ATP8B1 in canalicular membrane integrity</i>
9:35 - 10:05 am	<b>Coffee Break</b>
10:05 - 10:45 am	<b>Arnold von Eckardstein (University Hospital Zürich, Institute of Clinical Chemistry, Switzerland)</b> <i>Roles of ABCA1 and ABCG1 beyond lipid efflux</i>
10:45 - 11:25 am	<b>Kenneth Kin Wah To (The Chinese University of Hong Kong, School of Pharmacy, Hong Kong SAR, China)</b> <i>Epigenetic regulation of ABCG2 in human cancer cells</i>
<b>11:25 - 11:30am</b>	<b>Poster Awards</b>
<b>11:30 - 12:30 pm</b>	<b>Lunch</b>
<b>12:30 - 2:00 pm</b>	<b>Session 11. Brain penetration in CNS drug discovery</b> <b>Chair: Bruno Stieger</b>
12:30 - 1:10 pm	<b>Haojing Rong (Pfizer Global Research and Development, Groton, CT, USA)</b> <i>Human CNS Penetration: can it be predicted from preclinical data?</i>
1:10 - 1:50 pm	<b>Bo Feng (Pfizer Inc., Groton, CT, USA)</b> <i>The Synergistic Effect of P-Glycoprotein and Breast Cancer Resistance Protein on Limiting the Brain Penetration of Drug</i>
<b>2:00 - 6:00 pm</b>	<b>Session 12. Nucleoside Transporters: Roles in the pharmacodynamics of nucleoside drugs, genetic disorders and alcoholism</b> <b>Chair: Jash Unadkat</b>
2:00 - 2:40 pm	<b>Jashvant (Jash) Unadkat (University of Washington, School of Pharmacy, Seattle, WA, USA)</b> <i>Nucleoside Transporters: Overview and Role in Treatment of Viral Diseases</i>
2:40 - 3:10 pm	<b>Coffee Break</b>
3:10 - 3:50 pm	<b>Marcal Pastor-Anglada (University of Barcelona (IBUB) and CIBER EHD, Barcelona, Spain)</b> <i>Nucleoside transporters: role in cancer chemotherapy</i>
3:50 - 4:30 pm	<b>Raj Govindarajan (University of Georgia, Athens, GA, USA)</b> <i>Human Equilibrative Nucleoside Transporter-3: Localization, Transport, &amp; Potential Link to Human H Syndrome and PHID Syndrome</i>
4:30 - 5:10 pm	<b>Doo-Sup Choi (Mayo Clinic College of Medicine, Rochester, MN, USA)</b> <i>Implication of Nucleoside Transporters in Alcoholism and Neurological Disorders</i>
<b>5:10 pm</b>	<b>Closing remarks</b>
<b>7:00 - 10:00 pm</b>	<b>Special farewell dinner at the historic "Schloss Schadau"</b>