ABC Workshop 2008 Program

September 24, 2008

9:00 –10:00  Registration

10AM-12 PM

10AM  Welcome  Michael Dean

10:30  Session 1  P-Glycoprotein in Disease and Drug Resistance
  Chair- Bjorn Bauer

10:30  Talk 1  Bjorn Bauer
  P-glycoprotein and the “Sacred Disease” – Unraveling Drug-Resistant Epilepsy

11:00  Talk 2  Mathew Hall
  The development of the MDR1-selective agent NSC73306

11:20  Talk 3  Rupeng Zhuo
  Targeting the catalytic cycle to screen ABC transporter P-glycoprotein mediated multidrug
  resistance reversers

11:40  Talk 4  Hua Zhu
  Roles of MicroRNA miR-27a and miR-451 in the Regulation of MDR1/P-glycoprotein
  Expression in Human Cancer Cells

12-1:30 Lunch Break in the Café and Posters

1:30-3:10  Session 2  Pseudoxanthoma elasticum, ABCC6, and Vitamin K
  Chair- Jouni Uitto

1:30  Talk 5  Jouni Uitto
  Overview of PXE research in mouse and man

1:50  Talk 6  Patrick Terry
  Update on PXE Research & Clinical Trials

2:10  Talk 7  Tamas Aranyi
  How segmental duplications shape our genome: recent evolution of ABCC6 and PKD1
  Mendelian disease genes

2:30  Talk 8  Olivier Le Saux
  New Insights into the pathologic mechanism of pseudoxanthoma elasticum

2:50  Talk 9  Qiujie Jiang
  Cell-based Therapy for Pseudoxanthoma Elasticum: Reduction of Connective Tissue
  Mineralization in a Mouse Model (Abcc6-/-) by Transplantation of Wild-type Hepatocytes

3:10-4:10 Break and Posters
4:10-5:50  **Session 3**  
**Drug Resistance and Drug Transport**
*Chair Zuben Sauna*

4:10  **Talk 10**  
Zuben Sauna  
Understanding the catalytic cycle of ABC transporters: The devil is in the details

4:30  **Talk 11**  
Anika Hartz  
It’s the Environment: Diesel Exhaust Particles induce P-glycoprotein at the Blood-Brain Barrier through Oxidative Stress and Proinflammatory Signaling

4:50  **Talk 12**  
Sylvia Notenboon  
cPLA2 Is Critical For P-glycoprotein Upregulation in Drug-Resistant Epilepsy

5:10  **Talk 13**  
Dana Emmert  
Modulating P-glycoprotein to Enhance Neurodegenerative and Cancer Drug Penetration to the Brain

5:30  **Talk 14**  
Jody Mack  
Increased sensitivity of ABCA2 KO mice to estramustine phosphate treatment

**Transportation to Hotel/Dinner – Hampton Inn Frederick**
September 25, 2008

9-10:20  **Session 4  ABCB Family Half Transporters**

9:00  **Introduction and Chair  John Schuetz**

9:20  **Talk 15  Jean Pierre Gillet**
ABCB5, a poorly characterized ABC transporter highly expressed in Melanoma

9:40  **Talk 16  Yu Fukuda**
ABCB6 contains a post-translational modification at the N-terminus that is important for its trafficking

10:00  **Talk 17  John Lynch**
Hemoprotein regulation by a mitochondrial transporter impacts cell survival under stress.

10:20  **Talk 18  Amit Tiwari**
EGFR Tyrosine Kinase Inhibitor AG1478 has Differential Effects on the Function of ABCB1 and ABCG2 Transporters

11:40-12  **Break and Posters**

12-1:30  **Lunch and Posters**

1:50-3:30  **Session 5  ABCC Proteins in Cystic Fibrosis and Drug Resistance**
  **Chair Susan Cole**

1:50  **Talk 19  Tamas Hegedus**
CFTR NBD1 folding and domain-domain interactions affected by the DF508 mutation

2:10  **Talk 20  Tozammel Hoque**
Membrane localization of MRP4 is regulated by NHERF1 in polarized kidney epithelial cells

2:30  **Talk 21  Steven Molinski**
Functional analysis of three acidic residues in the cytoplasmic α-helical region COOH-proximal to TM17 in the multidrug transporter MRP1 (ABCC1)

2:50  **Talk 22  Gary Piazza**
Novel MRP1 Inhibitors as Identified by High Throughput Screening

3:10  **Talk 23  Tong Shen**
Cepharanthine Is a Potent Reversal Agent for MRP7-Mediated Multidrug Resistance

3:30  **Talk 24  V. Raghuram**
Conformational Changes in CFTR Transmembrane Segments During Channel Gating

3:30-5:00  **Break and Posters**
5:00-6:00  Session 6  TAP
Chair Malini Raghavan

5:00 Talk 25 Malini Raghavan
Functions of the TAP complex in immune responses against infections

5:20 Talk 26 Syed Rizvi
Beyond Transport: Oxidoreductase interactions with the TAP complex

5:40 Talk 27 Nina Kressig
The D-Loop – the forgotten hallmark of ABC transporters

Transportation to Hotel/Dinner – Danielle’s Restaurant
6 N East St. Frederick
September 26, 2008

9-12:00  **Session 7**  ABCG

9:00  **Introduction and Chair Andras Varadi**

9:20  Talk 28  Liwu Fu
Reversal of multidrug resistance by lapatinib

9:40  Talk 29  Eric Lee
Oligomers and Single-Particle Analysis of the Sterol Transporter ABCG5/G8

10:00  Talk 30  John Golin
Mutations Define Cross Talk between the N-Terminal Nucleotide Binding Domain and Transmembrane Helix-2 of the Yeast Multidrug Transporter Pdr5

10:20  Talk 31  Suneet Shukla
In vivo inhibition of activity of P-glycoprotein and ABCG2, multidrug resistance-linked ABC drug transporters in mice by a nutraceutical agent curcumin

10:40  Talk 32  Curt Henrich
Natural product inhibitors of ABCG2

**Session 8**  Stem Cells, PGP and Drug Resistance
**Chair Saibal Dey**

11:00  Talk 33  Anna Calcagno
Putative stem cell surface marker expression is modulated by drug selection regimen

11:20  Talk 34  King Fung
The Effect of ABCB1 Haplotype on Substrate Specificity in Recombinant LLC-PK1 Cells

11:40  Talk 35  Saibal Dey
Human P-glycoprotein: Searching for Molecular Switches

12:00-1:30  **Lunch**

1:30  **Conference Ends**