

Poster Sessions

Session 1 (Mon, Sep. 25, 21:00-22:30) Odd numbered posters	Session 2 (Tue, Sep. 26, 21:00-22:30) Even numbered posters	Session 3 (Wed, Sep. 27, 17:45-18:45) Odd numbered posters
Session 4 (Wed, Sep. 27, 21:40-22:30) Even numbered posters	Session 5 (Thu, Sep. 28, 17:45-18:30) Even numbered posters	Session 6 (Thu, Sep. 28, 22:00-22:30) Odd numbered posters

Poster Boards

Board #	Title and Presenter
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|-----|---|
| 101 | Structural Elements Important for Oligomycin Inhibition of the Na ⁺ ,K ⁺ -ATPase
M.S. Toustrup-Jensen , <i>Aarhus University</i> |
| 102 | Effect of two asparagine-to-lysine substitutions found in the Na/K pump isoform upregulated in hypersalinity-adapted brine shrimp
Pablo Artigas , <i>Texas Tech University Health Sciences Center</i> |
| 103 | Free energy calculations suggest a mechanism for Na ⁺ /K ⁺ -ATPase ion selectivity
Joshua R. Berlin , <i>Rutgers University</i> |
| 104 | Relationship of Iron overload and the Na,K-ATPase activity: iron modulates the activity in E1 state of the erythrocytes pump
Leandro A. Barbosa , <i>Universidade Federal de São João del Rei</i> |
| 105 | Binding of Cardiotonic Steroids to Na,K-ATPase
Flemming Cornelius , <i>Aarhus University</i> |
| 106 | Mutation of Na ⁺ site III of Na ⁺ /K ⁺ -ATPase unexpectedly disrupts K ⁺ binding
Hang Nielsen , <i>Aarhus University</i> |
| 107 | Arginine replacement of Cys932 converts Na,K-ATPase to an electroneutral pump
Rikke Holm , <i>Aarhus University</i> |
| 108 | Understanding the role of N-terminus in conformational changes of sodium-potassium pump
Vikas Dubey , <i>University of Southern Denmark</i> |
| 109 | Kinetic Analysis of Sodium Pump from the Plasma Membrane of the Nasal Glands of Pekin Duck
Promod R. Pratap , <i>University of North Carolina</i> |

- 110 Application of EPR for description of the CTS-binding site of Na,K-ATPase
Natalya Fedosova, *Aarhus University*
- 111 Mechanistic studies of hyperaldosteronism-inducing Na/K pump mutants
Dylan Meyer, *Texas Tech University Health Sciences Center*
- 112 Cholesterol Modulation of Na⁺,K⁺-ATPase Activity in its Native Membrane Environment
Alvaro Garcia, *University of Sydney*
- 113 Glutathionylation in the Albers-Post scheme reproduces behavior of in situ Na⁺, K⁺-ATPase
Alvaro Garcia, *University of Sydney*
- 114 Modulation of the Na,K-ATPase by Magnesium Ions
Hans-Juergen Apell, *University of Konstanz*
- 115 Location, number, effect – Modulation of Na,K-ATPase by specific phospholipid interactions
Michael Habeck, *Aarhus University*
- 116 Electrogenic exchange of ions at the cytoplasmic side of the Na,K-ATPase
Vsevolod Tashkin, *Frumkin Institute of Physical Chemistry and Electrochemistry*
- 117 Structure of Na⁺,K⁺-ATPase in the E2P state
Marlene U. Sørensen, *Aarhus University*
- 118 Epigallocatechin-3-gallate promotes tight binding of Na⁺ to the Na,K-ATPase
Rolando C. Rossi, *IQUIFIB, Universidad de Buenos Aires*
- 119 Relative contribution of Na,K-ATPase $\alpha 4$ and Na,K-ATPase $\alpha 1$ isoforms to sperm motility
Gustavo Blanco, *University of Kansas Medical Center*
- 120 Translational study on disease associated with mutation in ATP1A3 gene
Evgeny E. Akkuratov, *Royal Institute of Technology, Sweden*
- 121 Na/K-ATPase signaling as a potential therapeutic target in pulmonary arterial hypertension
Jiayan Wang, *Marshall University*
- 122 Na,K-ATPase isoform-selective cardiac glycosides
Adriana Katz, *Weizmann Institute of Science*
- 123 Contrasting effects of beta-amyloid and its phosphorylated isoform on Na,K-ATPase activity
Vladimir Mitkevich, *Engelhardt Institute of Molecular Biology*
- 124 Na,K-ATPase-associated diseases
Hanne Poulsen, *Aarhus University*

- 125** Na,K-ATPase signaling function changes under hypoxic conditions: the role of Cys 458, 459
Irina Yu. Petrushanko, *Engelhardt Institute of Molecular Biology*
- 126** Basal glutathionylation of Na,K-ATPase alpha-subunit depends on redox status of cells during the enzyme biosynthesis
Irina Yu. Petrushanko, *Engelhardt Institute of Molecular Biology*
- 127** Cisplatin Interacting with Na⁺/K⁺-ATPase: Role of Cysteines on the Cytoplasmic Loop
Jaroslava Šeflová, *Palacký University*
- 128** Atp1a3 heterozygous KO mice show lower ranking in the hierarchy through altered social behavior
Hiroki Sugimoto, *Jichi Medical University*
- 129** Astrocytic Na⁺/K⁺-ATPase α2β1 and α2β2 manages [K⁺]_o differently during synaptic activity
Nanna MacAulay, *University of Copenhagen*
- 130** Distribution of α3 subunit of Na,K-ATPase during early development
Natalia Akkuratova, *Karolinska Institut*
- 131** Cysteines 244, 458 and 459 and mitochondrial Na/Ca exchanger make Na,K-ATPase O₂-sensitive
Anna Bogdanova, *University of Zurich*
- 132** Antihypertensives prevent Na/K-ATPase changes in ouabain-induced hypertensive rats
Luis E. M. Quintas, *Universidade Federal do Rio de Janeiro*
- 133** Cardiomyocyte-specific knockout of Na⁺/K⁺-ATPase α1-isoform
Sandrine V. Pierre, *Marshall University*
- 134** Genetic Evidence of α1 Na/K-ATPase as an Important Signal Integrator
Xiaoliang Wang, *Marshall University*
- 135** Effects of acute digoxin intake on skeletal muscle Na⁺,K⁺-ATPase content, plasma K⁺ regulation and fatigue during intense exercise in healthy young adults
Michael J. McKenna, *Victoria University*
- 136** Fundamental Difference Between Na Pump Inhibitor and Activator Induced Positive Inotropy
Kai Y. Xu, *University of Maryland School of Medicine*
- 137** Na/K-ATPase α1 isoform-specific regulation of growth and metabolism: a novel role in skeletal muscle structure and function
Laura C. Kutz, *Marshall University*
- 138** Ouabain enhances the ADPKD renal cystic phenotype
Gladis Sánchez, *University of Kansas Medical Center*

- 139** Ouabain in low concentrations stimulates the sodium-potassium pump in cardiac myocytes but stimulation is transient
Yeon J. Kim, *University of Sydney*
- 140** Ouabain-induced migration depends on MMP-2 activation
Odette Verdejo-Torres, *Cinvestav*
- 141** Effect of PDE5 inhibition on ANP regulation of the Na⁺-K⁺ pump
Elisha J. Hamilton, *University of Sydney*
- 142** Functional characterization of selected ATP1A3 disease-causing mutations
Christian P. Rønn, *Aarhus University*
- 143** An iPSC-Derived Neuronal Model for Investigating ATP1A3 Mutations in AHC
John P. Snow, *Vanderbilt University*
- 144** A de novo mutation in ATP1A1 associated with catastrophic epilepsy
Paula Kinoshita, *Karolinska Institute / University of São Paulo*
- 145** Comparison of biological functions of antibodies against different domains of Na⁺/K⁺ ATPase
Siping Xiong, *National University of Singapore*
- 146** NaKtide Targeted to Adipocytes Inhibits Na/K-ATPase ROS, Systemic Inflammation, and Obesity Development in Mice Fed a Western Diet
Jiang Liu, *Marshall University*
- 147** Is Impaired Na/K-ATPase Signaling a Commonly Featured Characteristic in Salt-sensitive Hypertension?
Yanling Yan, *Marshall University*
- 148** Na/K-ATPase-mediated Src Interaction in Control of Aerobic Glycolysis in Cancer
Xiaoyu Cui, *Marshall University*
- 149** Role of Na⁺/K⁺ ATPase α 1 in brain excitotoxicity
Lei Cao, *National University of Singapore*
- 150** Regulation of the secretory pathway Ca²⁺ ATPases SPCA1a and SPCA2 by Ca²⁺ and Orai1
Jialin Chen, *KU Leuven*
- 151** The passage of ions
Thomas L-M Sørensen, *Diamond Light Source*
- 152** Effects of phospholipid's head groups on the properties of sarcoplasmic reticulum Ca²⁺-ATPase embedded in nanodisc
Kazuo Yamasaki, *Asahikawa Medical University*
- 153** Glycine 105 as Pivot for a Critical Knee-like Joint between Cytoplasmic and Transmembrane Segments of the Second Transmembrane Helix in Ca²⁺-ATPase
Takashi Daiho, *Asahikawa Medical University*

- 154** Inhibition of sarcoplasmic reticulum Ca^{2+} -ATPase activity by linoleamide and oleamide
Sachiko Yamamoto, *Kyorin University School of Medicine*
- 155** Dynamics of P-type ATPase transport cycle revealed by single molecule FRET
Magnus Kjaergaard, *Aarhus University*
- 156** Thapsigargin as a lead compound for developing other P-type ATPase inhibitors
Jialin Chen, *KU Leuven*
- 157** Crystal structures of the cardiac sarcoplasmic reticulum Ca^{2+} -ATPase in two conformational states
Aljona Sitsel, *Aarhus University/KU Leuven*
- 158** Membrane Perturbation of ADP-insensitive Phosphoenzyme of Ca^{2+} -ATPase Modifies Gathering of Transmembrane Helix M2 with Cytoplasmic Domains and Luminal Gating
Stefania J. Danko, *Asahikawa Medical University*
- 159** Novel allelic mutations in murine Serca2 induce differential development of squamous cell tumors
Osamu Minowa, *RIKEN Bioresource Center*
- 160** Structural mechanism for SERCA uncoupling by sarcolipin through the lens of the computational microscope
L. Michel Espinoza-Fonseca, *University of Minnesota*
- 161** The role of FXYP1 protein in energy metabolism
Alexander V. Chibalin, *Karolinska Institutet*
- 162** Silencing FXYP3 Protein in Human Pancreatic Cancer Cells Enhances Cytotoxic Effect of Doxorubicin
Chia-chi Liu, *University of Sydney*
- 163** Crystal structures of calcium pump in complex with sarcolipin/phospholamban
Yoshiki Kabashima, *The University of Tokyo*
- 164** Towards a structure of the yeast lipid flippase, Drs2p/Cdc50p, using cryo-electron microscopy
Milena Laban, *Aarhus University*
- 165** The role of phospholipid flippase in myotube formation
Yuji Hara, *Kyoto University*
- 166** Identification of mammalian glucosylceramide flippase and its transport mechanism
Tomoki Naito, *Kyoto University*
- 167** N905 of TM6 is crucial to the function of the mammalian flippase ATP8A2
Stine A. Mikkelsen, *Aarhus University*

- 168** Towards the structure of yeast and mammalian P4-ATPases
Joseph A. Lyons, *Aarhus University*
- 169** Slow phospholipid exchange between a detergent-solubilized membrane protein and lipid-detergent mixed micelles: brominated phospholipids as tools to follow its kinetics
Cedric Montigny, *CEA / CNRS*
- 170** Toward Functional Characterization of a Human Phospholipid Transporter Involved in Progressive Familial Intrahepatic Cholestasis 1 (PFIC1)
Thibaud Dieudonné, *CEA / CNRS*
- 171** Mutational analysis of a peripheral pathway for phospholipid transport in ATP8A2
Louise S. Mogensen, *Aarhus University*
- 172** Cell-based flippase activities of P4-ATPases in transiently transfected human cell lines
Angela Y. Liou, *University of British Columbia*
- 173** Ion-binding to purified and functional human copper transporting P-type ATPase ATP7B
Christina Grønberg, *University of Copenhagen*
- 174** Functional characterisation of the first primary active magnesium transporter
J. Preben Morth, *Oslo University*
- 175** KdpFABC – novel insights into the dynamics of a unique P-type ATPase
Charlott Stock, *Goethe-University Frankfurt*
- 176** Electron spin resonance study on transport site in Cu²⁺-transporting protein
Satoshi Yasuda, *Asahikawa Medical University*
- 177** Elucidating the structure of the metal bound states of zinc-transporting P_{1B}-type ATPases.
Elena Longhin, *University of Copenhagen*
- 178** Functional studies of a P_{1B-4}-ATPase
Qiaoxia Hu, *University of Copenhagen*
- 179** The role of cardiolipin in magnesium transport by magnesium transporter A (MgtA)
Julia A. Weikum, *Norwegian Centre of Molecular Medicine*
- 180** Membrane Anchoring and Ion-Entry Dynamics in P-Type ATPase Copper Transport
Magnus Andersson, *KTH Royal Institute of Technology*
- 181** Structural studies of a metal-bound zinc-transporting P_{1B}-type ATPase
Annette Duelli, *University of Copenhagen*
- 182** Lipid-induced relief of N-terminal-mediated auto-inhibition of ATP13A2/PARK9
Sarah van Veen, *KU Leuven*

- 183** ATP13A2 protects mitochondrial network functionality
Shaun Martin, *KU Leuven*
- 184** Probing the activity of a bacterial Zn²⁺-transporting P-type ATPase
Harsha Ravishankar, *KTH Royal Institute of Technology*
- 185** Native truncation of plant P1B-ATPases by use of CRISPR/Cas9
Jeppe T. Østerberg, *University of Copenhagen*
- 186** P3A-ATPase proton pumps drive pollen tube growth
Lene I. Olsen, *University of Copenhagen*
- 187** P5-ATPases and calcium. Twinkle twinkle little star...
Hugo P. Adamo, *IQUIFIB/University of Buenos Aires*
- 188** ATP13A2 Regulates HDAC6 Activity to Control Autophagosome-Lysosome Fusion
Ruoxi Wang, *Central South University*
- 189** Computer Simulations of Ion Pathways in Na⁺/K⁺-ATPase
Petra Čechová, *Palacký University*
- 190** New cation pathways and nucleotide dynamics in Na⁺/K⁺-ATPase
Martin Kubala, *Palacky University*
- 191** Conformational changes of Ca²⁺-ATPase depicted by hierarchical domain-motion analysis
Chigusa Kobayashi, *RIKEN AICS*
- 192** ICP-MS-MS Analysis of Biological Micro Samples with Heteroatoms & Micro Samples to Measure the Activity of the Na⁺, K⁺ ATPase
Cory A. Stiner, *University of Cincinnati*
- 193** Single-Molecule Studies of ATP Binding to the Sodium Pump
Promod R. Pratap, *University of North Carolina at Greensboro*
- 194** Hydrogen bond networks around the ion-binding sites of Na⁺,K⁺-ATPase in the state E2 determined by DFT calculations
Chikashi Toyoshima, *The University of Tokyo*
- 195** Crystal structures of Na⁺,K⁺-ATPases revised
Ryuta Kanai, *The University of Tokyo*
- 196** 21-Benzylidene Digoxin Modulate the Na,K-ATPase Activity and lipid Membrane content
Leandro A. Barbosa, *Universidade Federal de São João del Rei*