

International Workshop

Proton and Proton-coupled Transport

Organized by the German Biophysical Society, section Medial Biophysics
(Deutsche Gesellschaft für Biophysik)

Friday, May 27, 2016	
11:00-	Registration
12:30-13:15	Lunch
Virus Channels	
13:15-13:20	Welcome note (Jochen Hub and Gerhard Thiel, Göttingen and Darmstadt)
13:20-14:10	Isaiah Arkin (Jerusalem, Israel) <i>Mapping the resistance potential of Influenza against an antiviral drug</i>
14:10-15:00	Gregory Voth (Chicago, USA) <i>Proton Transport in Proteins: Insights and Surprises from Multiscale Simulation</i>
15:00-15:20	Joachim Heberle (Berlin, Germany) <i>Proton transfer steps and helix hydration in channelrhodopsin</i>
15:20-15:50	Coffee break
Proton dynamics	
15:50-16:40	Noam Agmon (Jerusalem, Israel) <i>Dynamics of "proton wires" in the green fluorescent protein</i>
16:40-17:20	Peter Pohl (Linz, Austria) <i>Proton migration along membranes</i>
17:20-17:40	Mario Vazdar (Zagreb, Croatia) <i>Molecular Dynamics Simulations of Reactive Aldehydes in Model Biological Membranes</i>
17:40-18:00	Gül Bekcioglu-Neff (Halle, Germany) <i>Nanoscale water wires in aqueous solutions: Fiction or characteristic structural motifs?</i>
18:00-19:00	Dinner
Plenary Evening Talk	
19:15-20:15	William DeGrado (San Francisco, USA) <i>Analysis and design of proton transporters.</i>
20:15-	Poster session with open end

Saturday, May 28, 2016	
7:00-8:30	Breakfast
Antiporters and other channels	
8:30-9:10	Özkan Yildiz (Frankfurt, Germany) <i>Substrate Binding and Transport by Sodium/Proton-Antiporter</i>
9:10-9:50	Elena Pohl (Vienna, Austria) <i>Uncoupling proteins and proton transport</i>
9:50-10:10	Octavian Calinescu (Bucharest, Romania) <i>A Universal Transport Mechanism for Na⁺/H⁺ Exchangers</i>
10:10-10:40	Coffee break
Voltage-, light-, and pH-gating	
10:40-11:30	Tom DeCoursey (Chicago, USA) <i>The Selectivity Mechanism of the Voltage-gated Proton Channel</i>
11:30-11:50	Johannes Vierock (Berlin, Germany) <i>High proton selectivity of the red-shifted channelrhodopsin Chrimson</i>
11:50-12:10	Gustavo Chaves (Nuremberg, Germany) <i>A voltage-gated proton channel in insects</i>
12:30-13:30	Lunch
13:30-14:10	Thomas Berger (Bonn, Germany) <i>Molecular Motions of the Voltage-Gated Proton Channel Hv1</i>
14:10-14:30	Arend Vogt (Berlin, Germany) <i>Conversion of light-driven proton pumps into light-gated proton channels</i>
14:30-14:50	Melania Capasso (London, UK) <i>The role of the voltage-gated proton channel Hv1 in B cell malignancies</i>
14:50-15:30	Indra Schröder (Darmstadt, Germany) <i>Control of M2 current by cytosolic pH: the power of model-based IV curve analysis.</i>
15:30-16:00	Coffee break
Proton transfer during energy transduction I	
16:00-16:20	Lars J.C. Jeuken (Leeds, UK) <i>Single enzyme experiments reveal a long-lifetime proton leak state in a heme-copper oxidase</i>
16:20-16:40	Shreyas Supekar (Munich, Germany) <i>A protonated water-cluster as a transient proton-loading site in cytochrome c oxidase</i>
17:30	Leaving to Potsdam by bus
19:00-22:30	Conference Dinner on lake Wannsee

Sunday, May 29, 2016	
7:00-9:00	Breakfast
Formate-Nitrite-Transporters	
9:00-9:40	Gary Sawers (Halle, Germany) <i>Regulation of substrate transport by FocA, a member of the FNT family of anion channels</i>
9:40-10:20	Eric Beitz (Kiel, Germany) <i>PfFNT - the missing lactate/H⁺ symporter in malaria parasites</i>
10:20-10:40	Kalina Atkovska (Göttingen, Germany) <i>Energetics and mechanism of permeation in FNT channels</i>
10:40-11:10	Coffee break
Proton transfer during energy transduction II	
11:10-11:50	Gerhard Hummer (Frankfurt, Germany) <i>Proton transfer reactions in biological energy transduction</i>
11:50-12:10	Melanie Köhler (Linz, Austria) <i>Key differences in the binding mechanism of purine nucleotides to mitochondrial uncoupling proteins studied by recognition force spectroscopy</i>
12:10-12:30	Ana Gamiz-Hernandez (Munich, Germany) <i>Electron transfer of Quinone in the Respiratory Complex I</i>
12:30-12:40	Closing
12:50-13:50	Lunch
End of Meeting and Departure	