

THE NOVO NORDISK PRIZE SYMPOSIUM 2017

PUMPs – PUMPkin and beyond

This symposium is sponsored by the Novo Nordisk Foundation in honor of Poul Nissen as Novo Nordisk Prize awardee 2017.

PROGRAM

Thursday 18 May

- 10:00 Registration and visit to the museum
- 11:00 Introduction by Prof. Jørgen Frøkiær, Committee for the Novo Nordisk Prize
- 11:15 Welcome address by Prof. Poul Nissen, Director of the PUMPkin Centre
- 11:40 **Murphy's law for the Na,K-ATPase** by Assistant Prof. Hanne Poulsen
- 12:00 *Lunch*
- Session 1 (13:00-15:30), chair PhD student Milena Laban**
- 13:00 **CryoEM studies of the huntingtin protein** by Prof. Hans Hebert
- 13:30 **Membrane complexes and the resolution revolution in cryoEM** by Prof. Werner Kühlbrandt
- 14:00 **Modeling neurological diseases using NKA knock-in mice** by Associate Prof. Karin Lykke-Hartmann
- 14:15 **The magnesium transporter A, a bacterial P-type ATPase dependent on cardiolipin and selectively sensitive to free magnesium** by Principal investigator Jens Preben Morth
- 14:30 **From phylogenetic trees of P-type ATPases to the Rhea database of biochemical reactions** by Biocurator Kristian Axelsen
- 14:45 **Human mitochondrial tRNA maturation** by Postdoc Linda Reinhard
- 15:00 **Structure and conformational dynamics of the antigen translocation complexes** by Prof. Robert Tampé
- 15:30 *Coffee break*
- Session 2 (16:15-18:00), chair: PhD Toke Jost Isaksen**
- 16:15 **Hidden forces in lipid bilayers; The effect of asymmetric membrane forces on TREK-2** by Michael Voldsgaard Clausen
- 16:30 **Regulation of the secretory pathway Ca²⁺ ATPases SPCA1a and SPCA2 by Ca²⁺ and Orai1** by Associate Prof. Peter Vangheluwe
- 17:00 **Moving against the gradient** by Senior researcher Claus Olesen
- 17:15 **Zn-ATPases** by Postdoc Oleg Sitsel
- 17:30 **Structural insights into an acyl-CoA carboxylase from Mycobacterium tuberculosis** by Postdoc Mette Laursen
- 17:45 **Understanding transition metal selectivity in ion pumps and "storage" metalloproteins** by Assistant Prof. Gabriele Meloni
- 18:00 *Short break*
- Session 3 (18:15-19:20), chair: PhD student Marlene U. Sørensen**
- 18:15 **A stroll through the PUMPkin patch: Insights into inhibitors and regulators of the SERCA calcium pump** by Prof. Howard Young
- 18:45 **Regulatory interactions of calcium pumps** by principal beamline scientist and adjunct Prof. Thomas Lykke-Møller Sørensen
- 19:00 **KdpFABC** by Assistant Prof. Bjørn Pedersen
- 19:20 Closing remarks of the day by Prof. Poul Nissen
- 19:30 Dinner at Moesgaard Museum – Dinner talk by Prof. emeritus Marc le Maire
- 23:30 *Good night*

PROGRAM

(continued)

Friday 19 May

Session 4 (09:00-10:35), chair: PhD student Mette Ozol

- 09:00 **Dual Role of Secretory Pathway Calcium ATPase Isoform 2 in Breast Cancer Growth and Metastasis** by Prof. Rajini Rao
- 09:30 **Mipsagargin, Targeting Thapsigargin** by Prof. emeritus Søren Brøgger Christensen
- 09:50 **Calcium pumps defects in pathology** by Prof. Ernesto Carafoli
- 10:20 *Group photo*
- 10:35 *Coffee break*

Session 5 (11:00-13:00), chair: PhD student Alya Sitsel

- 11:00 **Recording of ion pump activity on solid supported membranes**
by Research associate Francesco Tadini-Buoninsegni
- 11:30 **Neuron specific Na,K-ATPase; its role in health and disease** by Prof. Anita Aperia
- 12:00 **Regulation of plant H⁺-ATPases by phosphorylation** by Associate Prof. Anja Fuglsang
- 12:15 **Regulation of a yeast flippase by its terminal extensions** by Associate Prof. Guillaume Lenoir
- 12:45 **Phospholipid flipping involves a central cavity in P4 ATPases**
by Associate Prof. Rosa Laura Lopez Marques
- 13:00 *Lunch*

Session 6 (14:00-15:10), chair: PhD student Christina Grønberg

- 14:00 **Structural studies on P4 ATPases** by Postdoc Joseph Lyons
- 14:15 **Single-molecule FRET studies of a Ca²⁺ pump** by Postdoc Mateusz Dyla
- 14:30 **Why do plants lack sodium pumps and would they benefit from having one?**
by Postdoc Jesper Pedersen
- 14:45 **Pumping plants - results so far and prospects for the future** by Prof. Michael Palmgren
- 15:10 *Closing remarks by Prof. Poul Nissen*
- 15:15 *Coffee and departure*



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