



AUSBI inauguration - Biophysics from the cell to nanoscale

Friday 10 February 2023 from 9:00-19:30

MBG Auditorium (1871-120), Dept. Molecular Biology and Genetics, Universitetsbyen 81, 8000 Aarhus

Programme

- 08:30 Coffee and registration
- 09:00 Welcome by **Poul Nissen** (Dept. Molecular Biology and Genetics / DANDRITE)
- 09:10 Keynote lecture by **Birthe B. Kragelund** (Dept. Biology, University of Copenhagen)
"Understanding Disordered Proteins Complexes by Integration"
- 09:35 Inspirational talk by **Lucy Holt** (Dept. Biology, University of Copenhagen)
Presentation of [ISBUC](#) (Integrative Structural Biology at University of Copenhagen)

SESSION I - HIGHER ORDER STRUCTURE AND THE CELL

Chair: **Rune Hartmann**

- 09:55 **Thomas Vorup-Jensen** (Dept. Biomedicine): *"Protein Aggregates and Inflammation"*
- 10:10 **Thomas L-M Sørensen** (Dept. Biological and Chemical Engineering): *"Organoids and Imaging"*
- 10:25 **Robert Fenton** (Dept. Biomedicine): *"Systems biology of Slc12 transporters - from mouse to man"*
- 10:40 **Tobias Weidner** (Dept. Chemistry): *"Structural biology at interfaces"*
- 10:55 **Fulvio Reggiori** (Dept. Biomedicine): *"Autophagy in Health and Disease"*
- 11:15 Group photo in the auditorium
- 11:20 Lunch and poster session (with prepared 2 min short-talks in front of posters)

SESSION II - EXPERIMENTAL STRUCTURE DETERMINATION

Chair: **Esben Lorentzen**

- 12:45 **Henrik Birkedal** (Dept. Chemistry): *"Hierarchical biological structures by multiscale and multimodal X-ray imaging"*
- 13:00 **Bjørn Pedersen** (Dept. Molecular Biology and Genetics): *"Molecular mechanisms of proton-driven transmembrane transport"*
- 13:15 **Poul Nissen** (Dept. Molecular Biology and Genetics / DANDRITE): *"Cryo-EM studies of mammalian membrane transporters"*
- 13:30 **Joseph Lyons** (Dept. iNANO): *"Structural and functional characterisation of lipid transport and metabolism systems"*

- 13:45 **Ditlev Brodersen** (Dept. Molecular Biology and Genetics): *"Understanding the molecular mechanisms of bacterial survival and immunity"*
- 14:00 **Daan van Aalten** (Dept. Molecular Biology and Genetics): *"Molecular mechanisms of O-GlcNAc signalling"*
- 14:15 **Mette Galsgaard Malle** (postdoc in Jørgen Kjems group, iNANO)
~~Christian Brix Folsted Andersen (Dept. Biomedicine): *"Structure and function of endocytic receptors"*~~ **CANCELLED**

14:35 Coffee and cake break

SESSION III - INFRASTRUCTURE AND FACILITIES

Chair: **Poul Nissen**

- 15:00 **Thomas Boesen** (Dept. iNANO): *"The EMBION National Cryo-EM Facility"*
- 15:15 **Michael Westberg** (Dept. Chemistry): *"A photoswitchable binder architecture for optical control of endogenous proteins"*
~~Søren Vrønning Hoffmann (Dept. Physics): *"Synchrotron Radiation Circular Dichroism facilities at ASTRID2"*~~ **CANCELLED**

SESSION IV - STRUCTURAL DYNAMICS

Chair: **Ebbe Andersen**

- 15:30 **Victoria Birkedal** (Dept. Chemistry): *"Single molecule fluorescence imaging of nucleic acids and proteins"*
- 15:45 **Frans Mulder** (Dept. Chemistry): *"Measuring protein electrostatics by NMR spectroscopy"*
- 16:00 **Daniel Otzen** (Dept. iNANO): *"The Protein Biophysics group: from self-assembly to disassembly"*
- 16:15 **Jørgen Kjems** (Dept. iNANO): *"Engineering biological nanopores for sensing"*

16:35 Coffee break

SESSION V - COMPUTATIONAL METHODS AND MODELLING

Chair: **Daniel Otzen**

- 17:00 **Birgit Schiøtt** (Dept. Chemistry): *"Complex membranes and how MD can provide insight in mechanism of membrane proteins"*
- 17:15 **Esben Lorentzen** (Dept. Molecular Biology and Genetics): *"Molecular mechanisms of cilium formation"*
- 17:30 **Ebbe Andersen** (Dept. iNANO): *"Folding and flexibility of RNA nanostructures revealed by cryo-electron microscopy and tomography"*
- 17:45 **Jan Skov Pedersen** (Dept. Chemistry): *"Small-angle X-ray scattering for investigations of biomolecular complexes and for validation of EM maps"*
- 18:00 **Lili Zhang** (Dept. Mechanical and Production Engineering): *"Multi-Scale Methods to Extract Mechanical Properties from Molecular Dynamics Simulations"*
- 18:15 **Chao Sun** (Dept. Molecular Biology and Genetics / DANDRITE): *"Quantitative, Single-molecule Approaches to Neuronal Proteostasis"*

18:30-19:30 Pizza and poster session