Programme for AUSBI Symposium 2025

Structural biology and biophysics from the sub-molecular to cellular scale and larger

Wednesday 2nd July 2025 from 9:00-18:00

Venue:
Aarhus Institute of Advanced Studies (AIAS)
Høegh-Guldbergs Gade 6B
8000 Aarhus

Scientific programme: AIAS Auditorium (1632-201)
Lunch, coffee and posters: AIAS Hall (1631-101)

08:30   **Coffee and registration**

09:00   Welcoming remarks by **Thomas Lykke-Møller Sørensen**, AUSBI steering group representative

09:10   Opening remarks by **Poul Nissen**, Vice-Dean for Research, Faculty of Natural Sciences

SESSION I – Integrated Methods for Structure and Dynamics
Chair: Rasmus Kock Flygaard

09:15   Invited keynote lecture (30+5 min)

               <u>Sigrid Milles</u>, Group Leader at Leibniz-FMP, Berlin, Germany

               Intrinsically disordered regulators of endocytosis
               - an integrated NMR/single molecule fluorescence approach

9:50   AUSBI principal investigator talk (15+5 min)

               <u>Santana Royan</u> (replacing Max Clabbers)
               Postdoc in Max Clabbers' group, Interdisciplinary Nanoscience Center (iNANO), Aarhus University

               Structural characterisation of a broad-spectrum bioplastic degrading enzyme
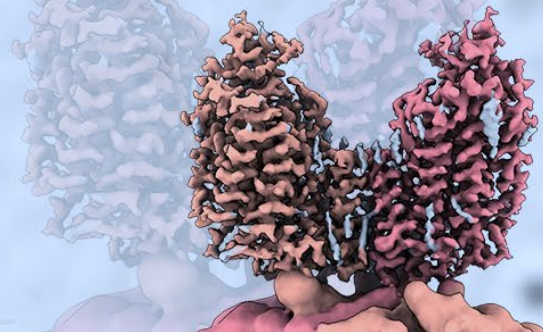
10:10   AUSBI junior researcher talk (15+5 min)

               <u>Moritz Burmeister</u>, PhD student in Victoria Birkedal's group, Interdisciplinary Nanoscience Center (iNANO), Aarhus University

               Extracting rate constants using single molecule localization microscopy

10:30   **Coffee break and poster session** (45 min)
               Even poster numbers present

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SESSION II – Integrated Methods for Structure and Dynamics (continued)
Chair: Victoria Birkedal

11:15   Invited keynote lecture (30+5 min)

Sebastian Westenhoff, Professor at Dept. Chemistry, Uppsala University, Sweden

Photoactivation in proteins studied by time-resolved crystallography and single-particle cryo EM

11:50   AUSBI junior researcher talk (15+5 min)

Bo Volf Brøchner, PhD student in Jørgen Kjems group, Interdisciplinary Nanoscience Center (iNANO), Aarhus University

Single-vesicle tracking of α-synuclein oligomers reveals pore formation by a three-stage model modulated by charge, curvature, lipids and ligands

12:10   Group photo

12:15   **Lunch**

SESSION III – Mechano Biology
Chair: Gregers R. Andersen

13:15   AUSBI principal investigator talk (15+5 min)

Jens Vinge Nygaard, Associate Professor at Dept. Biological and Chemical Engineering, Aarhus University

Introduction to Mechano Biology

13:35   Invited keynote lecture (30+5 min)

Ansgar Petersen, Professor at Berlin School for Regenerative Therapies, Germany

The cell- and tissue-instructive nature of biomaterial geometry and mechanics

14:10   AUSBI junior researcher talk (15+5 min)

Marlene Fruergaard, Postdoc in Gregers Rom Andersen's group, Dept. Molecular Biology and Genetics, Aarhus University

Three cryo-EM structures of the complement C3d-$\alpha_M\beta_2$ complex reveal a novel layer of dynamics

14:30   **Coffee break and Poster Session** (45 min)
Odd poster numbers present

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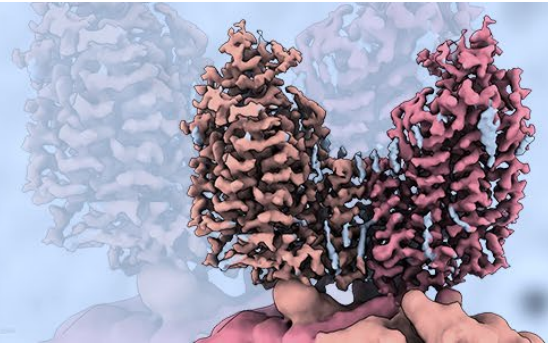
SESSION IV – Computational Innovation and Modelling
Chair: Michael Westberg

15:15	Invited keynote lecture (30+5 min)

Ulrik Nicolai de Lichtenberg, Scientific Director at Danish Centre for AI Innovation

Gefion – Denmark's new AI Supercomputer and how it can support biological research

15:50   AUSBI junior researcher talk (15+5 min)

Mette Galsgaard Malle, Postdoc in Jørgen Kjems's group, Interdisciplinary Nanoscience Center (iNANO), Aarhus University

Bacteriophage-Mimetic DNA Origami Needle for Targeted Membrane Penetration and Cytosolic Cargo Delivery

16:10   AUSBI Poster Prize announcement by **Rasmus Kock Flygaard**, AUSBI steering group representative

16:20   Closing remarks by **Michael Westberg**, AUSBI steering group representative

16:30   **Drinks and networking**

18:00   Thanks for today