

**12th - 13th
June 2025**

Niels K. Jerne
Auditorium
Panum, UCPH

SYMPOSIUM

**CHEMICAL
SOLUTIONS TO
STRUCTURAL
BIOLOGY**

**THE
PROGRAMME**



Organising Committee:

Morten Meldal (Chair), Dept. Chemistry, UCPH

Karen Martinez (Vice-Chair), Dept. Chemistry, UCPH

Claus Løland, Dept. Neuroscience, UCPH

Nikos Hatzakis, Dept. Chemistry, UCPH

Hosted by:

The Integrative Structural Biology cluster at the University of Copenhagen

INTEGRATIVE STRUCTURAL
BIOLOGY CLUSTER AT THE
UNIVERSITY OF COPENHAGEN



Funded by:

Novo Nordisk Foundation, Lundbeck Foundation and Carlsberg Foundation

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PROGRAMME

Day One

11th June
Level 15 Viewing Area, Mærsk Tower

WELCOME NETWORKING SESSION

Sponsored by Novo Nordisk Foundation

16:00 – 18:00

Registration and welcome reception with drinks and snacks

16:30

Welcome speech by Rector David Drejer Lassen

08:30 – 08:45

Registration

SESSION 1: BRIDGING STRUCTURAL BIOLOGY AND DRUG DISCOVERY

Sponsored by Lundbeck Foundation

08:45 – 09:00

Welcome Remarks: Morten Meldal (CSSB Chair)

09:00 – 10:00

Keynote Talk: **Brian Kobilka** (Stanford University)
G Protein Coupled Receptors: Challenges and New Approaches to Drug Discovery

10:00 – 10:30

Coffee Break

10:30 – 10:55

Invited Talk: **Jörg Rademann** (Freie Universität Berlin)
Biomimetics discovery from structure-based design and protein-templated reactions

10:55 – 11:20

Invited Talk: **Annette Beck-Sickinger** (Leipzig University)
G Protein-coupled peptides receptors: from structure to innovative ligands and therapeutic concepts

11:20 – 11:45

Invited Talk: **Nieng Yan** (Tsinghua University)
From sugar transporters to glycoconjugated ion channels

11:45 – 11:55

Flash Talk: **Sára T. Mellempgaard** (University of Copenhagen)
Design and Evolution of Functional I/d-Microproteins Against XIAP to Induce Apoptosis of Cancer Cells

11:55 – 13:00

Lunch**SESSION 2: UNRAVELLING DYNAMIC CELL BIOLOGY BY CHEMICAL SYNTHESIS**

Sponsored by Novo Nordisk Foundation

13:00 – 14:00

Keynote Talk: **Yamuna Krishnan** (University of Chicago)
Intracellular Electrophysiology

14:00 – 14:25

Invited Talk: **Nynke Dekker** (University of Oxford)
Title TBC

14:25 – 14:50

Invited Talk: **Patricia Bassereau** (Institut Curie)
Unraveling membrane protein dynamics and interactions at the single-molecule scale

14:50 – 15:00

Flash Talk: **Gerti Beliu** (University of Regensburg)
Decoding Hidden Conformational States in Living Cells through Chemical Biology

15:00 – 15:30

Coffee**SESSION 3: TAILORING PROTEIN FUNCTION**

Sponsored by Lundbeck Foundation

15:30 – 16:30

Keynote Talk: **Don Hilvert** (ETH Zurich)
Designing enzymes de novo

16:30 – 16:55

Invited Talk: **Kristian Strømgaard** (University of Copenhagen)
Targeting protein-protein interactions of receptor complexes with therapeutic peptides

16:55 – 17:20

Invited Talk: **Knud Jensen** (University of Copenhagen)
Selective chemical modification of proteins: His tag acylation

17:20 – 17:30

Flash Talk: **Dimitrios Mamalis** (University of Oxford)
Di-Gembodies as covalently-constrained, modular protein assemblies enable simultaneous determination of high-resolution, low-size, cryo-EM structures

17:30 – 20.00

Poster session with light bites and drinks

SESSION 4: SYNTHETIC APPROACHES TO STRUCTURAL BIOLOGY

Sponsored by Carlsberg Foundation

09:00 – 10:00	Keynote Talk: Ikuhiko Nakase (Osaka Metropolitan University) Unique intracellular delivery technology based on membrane-penetrating peptides with designed engineering
10:00 – 10:30	Coffee & Croissants
10:30 – 10:55	Invited Talk: Helma Wennemers (ETH Zurich) Chemistry in the Extracellular Matrix
10:55 – 11:20	Invited Talk: Thomas Poulsen (Aarhus University) Precision chemistry – from the protein to the proteome
11:20 – 11:45	Invited Talk: Christian Adam Olsen (University of Copenhagen) Targeting epigenetic regulators with peptide macrocycles
11:45 – 11:55	Flash Talk: Mette Galsgaard Malle (Aarhus University) Programmable RNA loading of extracellular vesicles
11:55 – 13:00	Lunch

SESSION 5: CHEMISTRY FOR FRONTIER IMAGING

Sponsored by Novo Nordisk Foundation

13:00 – 14:00	Keynote Talk: Markus Sauer (University of Würzburg) Molecular Resolution Fluorescence Imaging in Cells
14:00 – 14:25	Invited Talk: Ben Schuler (University of Zurich) Interaction dynamics of disordered proteins from single-molecule spectroscopy
14:25 – 14:50	Invited Talk: Nikos Hatzakis (University of Copenhagen) 4D cellular biology and machine learning analysis of cellular responses in delivery of biologicals
14:50 – 15:20	Coffee & Cake
15:20 – 15:45	Invited Talk: Sonja Schmid (University of Basel) Bringing structures to life: the broad-range dynamics of biomolecules uncovered by DyeCycling
15:45 – 16:10	Invited Talk: Jin Zhang (University California San Diego) Illuminating the Biochemical Activity Architecture of the Cell
16:10 – 16:20	Flash Talk: Céline Delaitre (University of Copenhagen) First Selective Fluorescent Ligands recognizing selectively Angiotensin II Receptors subtypes
16:20 – 16:40	Short Break

CLOSING SESSION

Sponsored by Novo Nordisk Foundation

16:40 – 17:40	Keynote Talk: Morten Meldal (University of Copenhagen) The Application of Click Chemistry in Chemical Biology
17:40 – 17:50	Award Ceremony: For best poster and flash talk (sponsored by Lundbeck Foundation)
17:50 – 18:00	Closing remarks: Birthe B. Kragelund (ISBUC Chair)
19:00 - onwards	Gala dinner at UCPH Festsal