

MBV 4270/9270 - BIOSTRUCT ADVANCED GLYCOBIOLOGY (2016)
by GlycoNor / The Faculty of Mathematics and Natural Sciences, UiO

Lectures in room 2203, Kristine Bonnevis hus unless otherwise announced.

Day 1: Monday, 18th of April, 2016 (Week 16)

9.15-10: **Kristian Prydz, IBV:** Welcome. Lecture defining the course.

10.15-12: **Ute Krenzel, KI:** Introduction to carbohydrate chemistry.

LUNCH BREAK - Students get their **colloquium I** projects presented and lunch delivered.

13.15-15: **Kristian Prydz, IBV:** Glycosylation in animal cells.

Day 2: Tuesday 19th of April, 2016

9.15-10: **Ivan Potapenko, Aarhus University Hospital:** Glycans and breast cancer.

10.15-12: **Line M. Grønning Wang, IMB:**

Reversible protein glycosylation in health and disease. The O-GlcNAc modification.

LUNCH

13.15-14: **Rita Pinto, IBV:** Mucins and cancer.

14.15-15: **Kristian Prydz, IBV:** Glycans and infectious disease – introduction.

Day 3: Wednesday 20th of April 2016

9.15-11: **Erik A. Eklund, University of Lund:** Glycosylation and genetic disease.

11.15-12: **Sara Lindén, University of Gothenburg:** Host-pathogen interactions in the mucous niche.

LUNCH BREAK

13.15-14: **Alexandre Corthay, CIR-Dept of Pathology:** Immunologically important glycans.

14.15-15: **Jan Terje Andersen, Centre for Immune Regulation:** N-glycosylation of antibodies: From biology to design of therapeutics.

Day 4: Thursday 21st of April 2016

9.15-10: **Anne Berit Samuelsen, School of Pharmacy:** Beta-glucan bioactivity

10.15-11: **Kari Tvette Inngjerdengen, School of Pharmacy:** Immunomodulating pectins.

11.15-12: **Anders Moen and Jan Anonsen, IBV:** Mass spectrometry of glycans.
LUNCH

13.15- rest of the day: More on MS of glycans. Site visit. Solving structures.

Day 5: Friday 22nd of April 2016

The students work on their presentations. Exam (other course) for some.

LUNCH

13.15-15: **Ole-Kristian Greiner Tollersrud. The Arctic University, Tromsø:** Tentatively: Glycosylation, lysosomal enzymes etc.

15.00 =>: The students present their first topics of self-study.

Day 6: Monday 25th of April 2016

10.15-11: **Gunnar Dick, UiO:** Proteoglycans in neuronal plasticity.

11.15-12: **Adnan Halim, University of Copenhagen:** Glycoproteomics

12.15-13 LUNCH. Students get their **colloquium II** projects presented and lunch delivered.

13.15-: Time to work on given topics.

Day 7: Tuesday 26th of April 2016

10.15-11: **Kirsten Sandvig, Inst for Cancer Research:** Glycolipids and glycoproteins, structure, ligands, and intracellular transport.

11.15-12: **Ute Krenzel, KI:** Bacterial toxins.

LUNCH

13.15-14: **Ute Krenzel, KI:** The role of glycans in viral infections.

Day 8: Wednesday 27th of April 2016

10.15- 12: **Ute Krenzel, KI:** X-ray crystallography in glycoscience.

LUNCH

After lunch: X-Ray: Demonstration of equipment, interpretation of data.

Day 9: Thursday 28th of April

9.15-10: **Paul H Backe, Rikshospitalet:** PGM3

10.15-12: **Mark Wormald, Oxford:** NMR in glycoscience.

Lunch

13.15-14: **Harri Itkonen, NCMM:** N-linked glycosylation of receptor tyrosine kinases.

14.15-15: **Harri Itkonen, NCMM:** Targeting O-GlcNAc transferase.

Day 10: Friday 29th of April

10.15-12: **Vincent Eijssink, NMBU:** Enzymes degrading polysaccharides.

LUNCH

13.15-15: **Mike Koomey, IBV:** Bacterial glycosylation systems. N- and O-glycosylation.

15.00 =>: The students present their second topics of self-study.

Day 11: Monday 2nd of May 2016 Helga Engs hus

Morning LECTURES in Auditorium 2:

9:15-10:00 Marina Aspholm, NMBU: "Bacterial adhesins."

10.15-11:00 Han Remaut, VIB, Belgium: "Structure and function of bacterial adhesins and pilins."

11:15-12:00 Jerry Eichler, Ben Gurion University of the Negev: "Sweet and extreme: N-glycosylation in the *Archea*."

12:00-13:15: LUNCH

Afternoon LECTURES in Auditorium 1, **Helga Engs hus**

13:15 WELCOME

13:20-14:05 Han Remaut, VIB, Belgium: "Structure and function of bacterial adhesins and pilins."

14.05-14.50: Jerry Eichler, Ben Gurion University of the Negev: "Sweet and salty: Protein glycosylation in the halophilic archaea."

14:50-15:10 COFFEE

15:10-16:45 Kaspar Locher, ETH: "Structural and mechanistic studies of the LLO flippase and the oligosaccharyltransferase from the N-glycosylation pathway of *Campylobacter jejuni*."