

A postgraduate course by Glycoscience Graduate School (GGS)

Glycan Biosynthesis and Functions

September 17-18, 2009

Linnanmaa Campus, University of Oulu, Finland,
Lecture hall BK130 (near the door J)

General Information:

The course is free for all interested including scientists outside the GGS. Advanced undergraduate students with suitable background are also welcome. Extend of the course is 0.5 ECTS (+poster 0.5 ECTS).

The course focuses on basics of protein glycosylation. The aim of the course is to give an up-to-date view on biosynthesis of glycans in eukaryotes, enzymes and organelles participating in protein glycosylation as well as glycans and their functions in extracellular space.

Course organizers:

Dr. Sakari Kellokumpu, Department of Biochemistry, University of Oulu
(sakari.kellokumpu(at)oulu.fi)

Prof. Raili Myllylä, Department of Biochemistry, University of Oulu

Dr. Ulla Petäjä-Repo, Institute of Biomedicine, Department of Anatomy and Cell Biology, University of Oulu

Invited speakers (confirmed):

Prof. Christelle Breton (University of Joseph Fourier, CERMAV-CNRS, Grenoble, France)

Prof. Neta Dean (Stony Brook University, NY, USA)

Prof. Daniel N. Hebert (University of Massachusetts, Amherst, MA, USA)

Prof. Maurizio Molinari (Institute for Research in Biomedicine, Bellinzona, Switzerland)

Dr. Russell Wallis (University of Leicester, Leicester, UK)

Dr. Harri Elamaa (University of Oulu, Finland)

Dr. Anu Jalanko (National Institute for Health and Welfare, Helsinki, Finland)

Dr. Heli Ruotsalainen (University of Oulu, Finland)

Dr. Raija Soininen (University of Oulu, Finland)

Prof. Markku Tammi (University of Kuopio, Finland)

Dr. Chunguang Wang (University of Oulu, Finland)

Registration:

Information and registration to Nina Kokkonen (nina.kokkonen(at)oulu.fi). Please register before **August 17, 2009**

A small quota of double rooms has been pre-booked, please inform by registration if you need the accommodation. Notify also of potential food allergies if you are planning to participate in the banquet. Participants are asked to take care of their own travel arrangements. Financial support for travel and accommodation costs is provided for GGS students.

Glycan Biosynthesis and Functions

Thursday 17.9. N-glycosylation and Glycoprotein Quality Control in the Endoplasmic Reticulum (ER)

12 ³⁰ -12 ⁴⁵	Ulla Petäjä-Repo	Opening Remarks
12 ⁴⁵ -13 ³⁰	Prof. Daniel N. Hebert (University of Massachusetts, Amherst, MA, USA)	Glycoprotein synthesis and maturation
13 ³⁰ -14 ¹⁵	Prof. Maurizio Molinari (Institute for Research in Biomedicine, Bellinzona, Switzerland)	ER quality control and ER-associated degradation of glycoproteins
14 ¹⁵ -15 ⁴⁵	Coffee & Posters	
15 ⁴⁵ -16 ³⁰	Dr. Anu Jalanko (National Institute for Health and Welfare, Helsinki, Finland)	Glycosylation, transport, and complex formation of palmitoyl protein thioesterase 1
16 ³⁰ -17 ⁰⁰	Piia Markkanen/Dr. Ulla Petäjä-Repo (Oulu, Finland)	Role of N-glycosylation in the maturation and trafficking of the human δ opioid receptor
	Banquet	

Friday 18.9. Golgi Glycosyltransferases and Maturation of Glycans

9 ⁰⁰ -9 ⁴⁵	Prof. Christelle Breton (University of Joseph Fourier–CNRS, Grenoble, France)	Structure and function of glycosyltransferases
9 ⁴⁵ -10 ³⁰	Prof. Neta Dean (Stony Brook University, NY, USA)	Yeast glycosyltransferases and complex formation
10 ³⁰ -11 ⁰⁰	Coffee	
11 ⁰⁰ -11 ³⁰	Antti Hassinen (Oulu, Finland)	Visualizing Golgi Glycosyltransferase complexes with BiFC
11 ³⁰ -12 ⁰⁰	Antti Rivinoja/Dr. Sakari Kellokumpu (Oulu, Finland)	Golgi pH and glycan maturation
12 ⁰⁰ -12 ³⁰	Prof. Markku Tammi (Kuopio, Finland)	Synthesis of hyaluronan
12 ³⁰ -13 ³⁰	Lunch	

Friday 18.9. Extracellular Glycans

13 ³⁰ -14 ¹⁵	Dr. Russell Wallis (University of Leicester, Leicester, UK)	Mannose binding lectins and ficolins
14 ¹⁵ -15 ⁰⁰	Dr. Raija Soininen (Oulu, Finland)	Heparan sulfate proteoglycans
15 ⁰⁰ -15 ³⁰	Coffee	
15 ³⁰ -16 ⁰⁰	Dr. Chenguang Wang (Oulu, Finland)	Extracellular lysyl hydroxylase 3
16 ⁰⁰ -16 ³⁰	Dr. Heli Ruotsalainen (Oulu, Finland)	Lysyl hydroxylase 3 functions in vivo
16 ³⁰ -17 ⁰⁰	Dr. Harri Elamaa (Oulu, Finland)	Basement membrane proteoglycan collagen XVIII and its function in the liver
17 ⁰⁰ -17 ¹⁰	Raili Myllylä	Concluding remarks