

2018 Society for Glycobiology Annual Meeting
Hilton New Orleans Riverside Hotel, New Orleans, LA
November 5-8, 2018

DAY 1: Monday, Nov 5, 2018

8:00AM – 6:00PM Registration

9:00AM – 4:00PM **Satellite 1: Bioinformatics Workshop**

9:00AM – 4:00PM **Satellite 2: Tools for Glycoscience**

1:00PM – 3:00PM **Board of Directors Meeting**

5:30PM – 7:15PM **Session 1: Meyer and Kornfeld Awards Lectures**

5:30PM - 5:45PM **Conference Opening Remarks**

5:45PM - 6:30PM **Karl Meyer Award Lecture: Naoyuki Taniguchi**

6:30PM - 7:15PM **Rosalind Kornfeld Award Lecture: John Lowe**

7:30PM – 9:30PM **Welcome Reception & Exhibits**

DAY 2: Tuesday, Nov 6, 2018

7:30AM – 8:30AM Continental Breakfast

8:30AM – 10:00AM **Session 2: Glycan biosynthesis, transport and quality control**

Session chair: Richard Steet (University of Georgia)

8:30AM - 9:00AM **Stuart Kornfeld** (Washington University in St. Louis)

Recycling of Golgi Glycosyltransferases Requires Direct Binding to Coatamer

9:00AM - 9:20AM **Simon Newstead** (University of Oxford)

Structural basis for nucleotide sugar transport across the ER and Golgi membranes

9:20AM - 9:40AM **Frederic Bard** (Institute of Molecular and Cell Biology, A*STAR, Singapore)

The GALA pathway and the O-glycans invasion program

9:40AM - 9:45AM **Poster talk: Vladimir Lupashin** (University of Arkansas for Medical Sciences)

COG and GARP protein complexes are essential for the maintenance of Golgi glycosylation machinery and for endosomal to Golgi vesicular trafficking.

9:45AM - 9:50AM **Poster talk: Marie-Estelle Losfeld** (ETH, Zurich)

In vivo kinetic analysis of the heterogeneous N-glycan-processing

9:50AM – 10:10AM **Coffee Break**

10:10AM – 12:30PM **Session 3: Structural basis for glycan biosynthesis**

Session chair: Bob Haltiwanger (University of Georgia)

10:10AM - 10:35AM **Kaspar Locher** (ETH Zurich)

Structure and mechanism of eukaryotic oligosaccharyltransferase complex

10:35AM - 11:00AM **Huilin Li** (Van Andel Research Institute)

Structural mechanism of the eukaryotic oligosaccharyl transferase complex

11:00AM - 11:15AM **Tadashi Satoh** (Nagoya City University, Japan)

Structural mechanisms underlying the ER quality control associated with glucose tagging

11:15AM - 11:35AM **Ramon Hurtado-Guerrero** (University of Zaragoza, Spain)

Structural and mechanistic insights into GalNAc-type O-glycosylation

11:35AM - 12:05PM **James Rini** (University of Toronto)

The structural basis for Protein-O-glycosylation of EGF-like and TSR domains

12:05PM -12:20PM **Zac Wood** (University of Georgia)

Origin of acceptor specificity in GT-A fold GlcNAc transferases

12:20PM -12:25PM **Poster talk: Amy J. Fernandez** (NIDCR, NIH)

The structure of GalNAc-T12 reveals the molecular basis of its substrate recognition mode

12:25PM - 12:30PM **Poster talk: Agata Steenackers** (NIDDK, NIH)

Optimization of expression of O-GlcNAc cycling enzymes for Cryo-Electron Microscopy

12:30PM – 1:30PM **Lunch on your own**

12:30PM – 1:30PM **Glycobiology Editorial Board Meeting**

1:30PM – 4:00PM **Poster Session I and Exhibits**

4:00PM – 6:00PM **Session 4: Glycan Function and Disease I**

Session chair: Hans Wandall (University of Copenhagen)

4:00PM - 4:20PM **Adam Barb** (Iowa State University)

Cell lineage impacts CD16a / Fc gamma Receptor 3a structure and antibody binding affinity through N-glycan composition

4:20PM - 4:35PM **Hiren Joshi** (University of Copenhagen)

Data in the driver's seat for exploring the glycome

4:35PM - 4:55PM **Robert Anthony** (Harvard Medical School)

Engineering anti-inflammatory IgG in vivo

4:55PM - 5:10PM **Karin Hoffmeister** (Medical College of Wisconsin)

Novel Insights into the Role of Glycans in the Bone marrow Niche

5:10PM - 5:15PM **Poster talk: Yuji Kondo** (Oklahoma Medical Research Foundation)

Site-1 protease is essential for activation of ER stress response for skeletal development but indispensable for the for the mannose-6-phosphate modification of lysosomal enzymes

5:15PM - 5:20PM **Poster talk: Asmi Chakraborty** (University of Alabama at Birmingham)

Glycosyltransferase ST6Gal-I promotes pancreatic ductal adenocarcinoma progression and metastasis.

5:15PM - 5:20PM **Poster talk: Riccardo Rizzo** (National Research Council, Napoli, Italy)

GOLPH3 promotes oncogenesis by controlling the intra-Golgi trafficking of glycosphingolipid synthases.

5:20PM - 5:25PM **Poster talk: Edward Campbell** (Loyola University Chicago)

A Role for Galectin Proteins and Glycans in Parkinson's Disease Pathogenesis

5:30PM – 6:30PM **Session 5: Innovator Award Lecture: Henrik Clausen** (University of Copenhagen) *Turning glycomics into Lego-toying*

DAY 3: Wednesday, Nov 7, 2018

7:30AM – 8:30AM Continental Breakfast

8:30AM – 10:00AM **Session 6: Glycoengineering and glyco-synthetic tools**

Session chair: Peng Wu

8:30AM - 8:50AM **Peng Wu** (Scripps Research Institute)

Engineering cells via chemoenzymatic glycan editing

8:50AM - 9:10AM **Matt Delisa** (Cornell University)

Glycoengineering without borders: bacteria-enabled cell-free glycoprotein synthesis

9:10AM - 9:30AM **Sabine Flitsch** (University of Manchester, UK)

Microbial glycoenzymes for carbohydrate synthesis and analysis

9:30AM - 9:45AM **Tim Keys** (ETH Zurich)

Engineering the next generation of glycoprotein therapeutics and vaccines in bacteria

9:45AM - 10:00AM **Matt Macauley** (University of Alberta)

New Platforms for the Discovery of Natural and Synthetic Siglec Ligands

10:00AM - 10:05AM **Poster talk: Leeann K. Klassen** (Agriculture and Agri-Food Canada; University of Lethbridge)

Lighting up the rumen: using fluorescent glycan conjugates to visualize diverse metabolic capabilities of rumen microbiota at the single cell level

10:05AM - 10:10AM **Poster talk: Marc D. Driessen** (Stanford University)

Making Glycoproteomics via Mass Spectrometry More Accessible to the greater Scientific Community

10:10AM - 10:15AM **Poster talk: M. Osman Sheikh** (University of Georgia)

Glycan function independent of glycoprotein identity: Cell Surface Glycan Engineering reveals that matriglycan rescues Lassa Virus infection in dystroglycan-deficient cells

10:15AM – 10:30AM **Coffee Break**

10:30AM – 12:15PM **Session 7: Glycan synthesis and function in parasites, pathogens, and microbes**

Session chair: Markus Aebi

10:30AM - 10:50AM **Chris Whitfield** (University of Guelph)

Capsular glycolipids in Gram-negative bacterial pathogens

10:50PM - 10:55PM **Poster talk: Cristina Y. Zamora** (MIT)

An in vitro gut-immune model illuminates N-glycosylation-dependent host-pathogen interactions of Campylobacter jejuni

10:55AM - 11:00AM **Dustin R. Middleton** (University of Georgia)

Immunological characterization of protein glycosylation in Streptococcus pneumoniae

11:00AM - 11:20AM **Emma Slack** (ETH Zürich Switzerland)

How IgA-bacterial glycan interactions can protect the intestine

11:20PM - 11:25PM **Poster talk: Karen Barnard** (Cornell University)

The use of glycoengineered cell lines for investigating influenza A interactions with modified sialic acids

11:25PM - 11:30PM **Poster talk: Mark Lehrman**

Targeting STT3A-Oligosaccharyltransferase Causes Herpes Simplex Virus 1 Dysfunction

11:30AM - 11:50AM **Nina Papavasiliou** (German Federal Cancer Research Center)

Sugars Increase the "Diversity-Space" of Trypanosoma Brucei Antigenic Variation

11:50AM - 12:10AM **Giulia Bandini** (Boston University)

O-fucosylation of nucleocytosolic proteins in Toxoplasma gondii and Cryptosporidium parvum

12:10AM - 12:30PM **Tamara Doering** (Washington University School of Medicine)

Capsule synthesis in the fungal pathogen Cryptococcus neoformans

12:30PM – 1:30PM **Lunch on your own**

1:30PM – 4:00PM **Poster Session II and Exhibits**

4:00PM – 4:45PM **SFG Business Meeting**

4:45PM – 6:15PM **Session 8: MCP and Glycobiology Significant Achievement Award Lectures**

4:45PM - 5:30PM **Molecular and Cellular Proteomics Award Lecture: Kay-Hooi Khoo**

5:30PM - 6:15PM **Glycobiology Significant Achievement Award Lecture: Galit Alter**

6:15PM – 7:00PM **Break**

7:00PM – 11:00PM **Banquet**

DAY 4: Thursday Nov 8, 2018

7:30AM – 8:30AM Continental Breakfast

8:30AM – 9:50AM **Session 9: Developmental and model systems**

Session chair: Mike Tiemeyer

8:30AM - 8:50AM **Mike Tiemeyer** (University of Georgia)

Glycan glucuronylation balances cell signaling during ovarian development

8:50AM - 9:10AM **Giovanni Deangelo** (Institute of Protein Biochemistry, National Research Council of Italy, Naples)

Glycosphingolipid metabolic reprogramming in neural differentiation

9:10AM - 9:25AM **Hideyuki Takeuchi** (Nagoya University School of Medicine)

Significant roles of O-glucose glycans in mammalian Notch trafficking and signaling

9:25AM - 9:40AM **Liping Zhang** (National Institute of Dental and Craniofacial Research)

Investigating the role of mucin-type O-glycosylation in secretory granule formation

9:40AM - 9:55AM **Vlad Panin** (Texas A&M University)

Protein O-mannosylation regulates axon wiring in the nervous system of Drosophila

9:55AM - 10:00AM **Poster talk: Nima Niknejad** (Baylor College of Medicine)

Roles of EGF repeat xylosylation in mammalian development and Notch signaling

10:00AM - 10:05AM **Poster talk: Eric E. Irons** (Roswell Park Comprehensive Cancer Center)

Neonatal ST6Gal-1 Expression Alters Microbiome Composition and Mucosal Immunity

10:05AM – 10:30AM Coffee Break

10:30AM – 12:00AM **Session 10: Plant glycan and cell wall biology**

Session chair: Bree Urbanowicz

10:30AM - 10:50AM **Bree Urbanowicz** (University of Georgia)

Structural and biochemical insights into the mechanism of plant polysaccharide acetylation

10:50AM - 11:10AM **Harry Brumer** (University of British Columbia)

Strength through diversity: The evolution of plant cell wall glucan-active enzymes in GH16

11:10AM - 11:30AM **Henrick Scheller** (Lawrence Berkeley National Laboratory)

Sphingolipid glycosylation and its role in membrane organization and plant-microbe interactions

11:15AM - 11:30AM **Wade Abbott** (University of Lethbridge)

Functional characterization of strain-specific glycan metabolism and single-cell visualization of glycan uptake within bacteria from the rumen microbiome

11:30AM - 11:45AM **Federica Brandizzi** (Michigan State University)

Impact of cell wall carbohydrates on plant growth

11:45AM - 11:50AM **Poster talk: Timothy P. Devarenne** (Texas A&M University)

A Unique Hydroxyproline-rich Glycoprotein from the green microalga Botryococcus braunii

11:55AM - 12:00PM **Poster talk: Debra Mohnen** (University of Georgia)
GAUTs synthesize diverse pectic HG glycans in structurally and functionally distinct plant cell wall polymers

12:00AM – 1:30PM Lunch on your own

1:30PM – 3:00PM Session 11: **Glycan function and Disease II**

Session chair: Adam Barb

1:30PM - 1:50PM **Thomas Clausen** (University of Copenhagen)
Targeting Oncofetal Chondroitin Sulfate for Cancer Therapy and Diagnosis

1:50PM - 2:10PM **Kevin Strauss** (Clinic for Special Children, Strasburg, PA)
Plain People and Precision Medicine: Lessons from a rural clinic

2:10PM - 2:30PM **Sasirekha Ramani** (Baylor College of Medicine)
New Frontiers in Rotavirus and Human Milk Oligosaccharide Interactions

2:30PM - 2:35PM **Poster talk: Matthew S. Gentry** (University of Kentucky)
Targeting pathogenic polyglucosan bodies in Lafora disease using an antibody-enzyme fusion

2:35PM - 2:55PM **Yoshiki Narimatsu** (University of Copenhagen)
Glycoengineering using GlycoCRISPR toolbox- Towards Cell-based Glycan Array for Dissection of Interactions with Glycans

2:55PM - 3:15PM **Heinz Laubli** (University Hospital Basel)
Targeting sialoglycan-mediated immune suppression for cancer immunotherapy

3:15 PM – 3:20PM **Closing Remarks**