

SFG 2025 Workshop:

Human Glycoimmunology in Health and Disease

Day 2, 15:00 – 16:00

Organizers: Vered Padler-Karavani, Tel Aviv University, Israel; Matthew Macauley, University of Alberta, Canada; Heinz Läubli, University of Basel, Switzerland.

Prof. Vered Padler-Karavani is a leading expert in human glycoimmunology, developing diagnostics and therapeutics for cancer, cardiovascular disease, and allergy using glycan microarrays and glyco-nanotechnology. Prof. Matthew Macauley is a world-renowned authority on Siglec biology, with pioneering work on their role in neurodegeneration and immune regulation. Prof. Heinz Läubli is a clinician-scientist specializing in cancer immunotherapy, focusing on glycan remodeling to enhance immune checkpoint therapies and cell-based treatments.

This Workshop will explore emerging insights in human glycoimmunology, focusing on the critical roles of glycans and glycan-binding receptors in health and disease. Talks will highlight advances in understanding immune recognition of glycans, their impact on chronic inflammation, cancer, cardiovascular disease, neurodegeneration, and allergy, and the development of glycan-based diagnostics and therapeutics. The Workshop will feature cutting-edge technologies including glycan microarrays, glyco-nanotechnology, and humanized mouse models. Key topics include Siglec-mediated immune modulation, glycan-targeted cancer immunotherapy and checkpoint blockade, and translational glycoimmunology for diagnostics and bioengineered therapeutics. This multidisciplinary forum will foster advanced discussions across glycobiology, immunology, oncology, and bioengineering to accelerate innovations in precision medicine.

Program: Day 2 (poster session 1), 15:00 – 16:00

- 15:00 – 15:10 **Matthew Macauley:** Siglec-mediated immune modulation
- 15:10 – 15:20 **Ana Arda:** Modulating glycan recognition for biomedical applications
- 15:20 – 15:30 **Xuefei Huang:** Therapeutic cancer vaccines
- 15:30 – 15:40 **Vered Padler-Karavani:** Translational glycoimmunology for diagnostics and bioengineered therapeutics
- 15:40 – 15:50 **Heinz Läubli:** Glycan-targeted cancer immunotherapy and checkpoint blockade
- 15:50 – 16:00 **Panel discussion**

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