



# International Joint Meeting GLUPOR15 & GLYCOTwinning 2025

## PROGRAMME

### Monday 15 September

**08:00-09:00**

**Registration**

**09:00-09:15**

**Opening & Welcome Session**

Nuno Empadinhas, Elisabete Coelho, Filipa Marcelo, Angelina Palma (President of the Carbohydrate Group of SPQ)

**Keynote Lecture**

**09:15 Salomé Pinho**, *i3S and IPATIMUP, University of Porto, Portugal*

**KL1** Glycans as master regulators of immune response in inflammation, autoimmunity and cancer: from disease prediction to therapeutic opportunities

Chaired by Nuno Empadinhas

**10:00-13:00**

**Session 1: Glycobiology in Health and Disease (Part 1)**

Investigating the critical functions of glycans in human health, disease progression, and therapeutic development

**Chairs:** Celso Reis & Yan Liu

10:00 **Paula Videira**, *UCIBIO, NOVA University of Lisbon, Caparica, Portugal*

**PL1** Glycosylation in cancer and rare diseases: Integrating mechanisms to advance precision medicine

10:30 **Daniela Tomás**, *i4HB and UCIBIO, NOVA University of Lisbon, Caparica, Portugal*

**OC1** From hyposialylation to immune response: a possible mechanism for GNE myopathy

10:45 **Marta Falcão**, *NOVA University of Lisbon, Caparica, Portugal*

**OC2** Glycosylation defects disrupt immunological pathways in PMM2-CDG

**11:00-11:25**

**Coffee Break**

**11:25-13:00**

## **Session 1: Glycobiology in Health and Disease (Part 2)**

**Chairs:** Helena Coelho & Ana Maranhã

11:25 **Joana Gomes**, *i3S, University of Porto, Portugal*

**IL1** The role of sialic acid in cancer therapy response and immunomodulation

11:45 **Carlos Lima**, *UCIBIO and i4HB, NOVA University of Lisbon, Caparica, Portugal*

**OC3** MGL-Drug conjugate: A novel glycan-targeted approach for targeting cancer cells

12:00 **Gonçalo Trindade**, *iBET & ITQB, NOVA University of Lisbon, Oeiras, Portugal*

**OC4** Unveiling the landscape of tumor-associated myeloid cells in immunosuppressive breast cancer

12:15 **Inês Ribeiro**, *i4HB and UCIBIO, NOVA University of Lisbon, Caparica, Portugal*

**OC5** Unveiling the role of Sialyl-Tn in pancreatic cancer progression and therapy

12:30 **Rafaela Abrantes**, *i3S and IPATIMUP, University of Porto, Portugal*

**OC6** Novel CAR T formulations targeting tumor-associated glycoepitopes: A new strategy for solid tumors

12:45 **Zélia Silva**, *UCIBIO and i4HB, NOVA University of Lisbon, Caparica, Portugal*

**OC7** Exploring the role of glycans in cancer therapy

**13:00-14:30**

**Lunch**

**14:30-15:35**

## **Session 2: Microbial Glycobiology and Microbe-Host Interactions (Part 1)**

Understanding the roles of carbohydrates in microbial behavior, immune responses, and host-pathogen dynamics

**Chairs:** Elisabete Coelho & Nuno Empadinhas

14:30 **Flaviana DiLorenzo**, *University of Naples Federico II, Italy*

**IL2** Lipopolysaccharides: Fantastic "structures" and where to find them

14:50 **Ana Maranhã**, *CIBB, University of Coimbra, Portugal*

**OC8** Polymethylated polysaccharides in mycobacteria: Dissecting their roles in stress adaptation and pathogenesis

15:05 **Daniela Nunes-Costa**, *CIBB, University of Coimbra, Portugal*

**OC9** Structural studies of a highly thermostable mycobacterial glucosyl-3-phosphoglycerate synthase (GpgS) reveal a cryptic aromatic binding pocket

15:20 **Benedita Pinheiro**, *UCIBIO & i4HB, NOVA University of Lisbon, Caparica, Portugal*

**OC10** Decoding mucin O-Glycan recognition by commensal *Bacteroides*: Structural and functional insights

**15:35-16:00**

**Coffee Break**

**16:00-17:00**

## **Session 2: Microbial Glycobiology and Microbe-Host Interactions (Part 2)**

Understanding the roles of carbohydrates in microbial behavior, immune responses, and host-pathogen dynamics

**Chairs:** Angelina Palma & Susana Alarico

16:00 **Ron Cornellis Hokke**, *LUCID, Leiden University Medical Center, The Netherlands*

**IL3** Schistosome glycosylation as key factor in host-parasite biology

16:20 **Cátia Soares**, *UCIBIO and i4HB, NOVA University of Lisbon, Caparica, Portugal*

**OC11** Structural insights reveal contextual O-Glycan cluster recognition by the mucin-binding module X409

16:35 **Helena Coelho**, *i4HB and UCIBIO, NOVA University of Lisbon, Caparica, Portugal*

**OC12** Defining host glycan ligands targeted by the giant adhesin SiiE of *Salmonella enterica*

**16:50-17:30**

**Flash Talks 1**

**17:30**

**Poster Session**

**18:00**  
**General Assembly GLUPOR**

**19:00**  
**Networking and Welcome Reception**

## Tuesday 16 September

**09:00-11:05**

### **Session 3: (Bio)Synthesis, Structural Analysis, and Molecular Recognition (Part 1)**

Unveiling innovative methods for carbohydrate synthesis, structural characterization, and their roles in molecular interactions

**Chairs:** Paula Videira & Filipa Marcelo

09:00 **Jésus Jimenez Barbero**, *CIC bioGUNE, Basque Research and Technology Alliance, Derio (Bizkaia), Spain*

**PL2** Breaking the limits in understanding glycan recognition by NMR

09:30 **Rita Ventura**, *ITQB NOVA University of Lisbon, Oeiras, Portugal*

**IL4** Synthesis and application of autoinducer-2 sugar derived prodrugs

09:50 **Ana Gimeno**, *CICbioGUNE, Basque Research and Technology Alliance, Derio (Bizkaia), Spain*

**OC13** Glycan-Lectin Interactions in context: New NMR approaches

10:05 **Ana Sofia Grosso**, *UCIBIO and i4HB, NOVA University of Lisbon, Caparica, Portugal*

**OC14** C1GalT1 and ST6GalNAc-I mechanistic insights in Mucin-1 O-glycosylation

10:20 **Ana Ardá**, *CICbioGUNE, Basque Research and Technology Alliance, Derio (Bizkaia), Spain*

**OC15** Molecular recognition properties of the tandem-repeats Galectin-4 and Galectin-9

10:35 **Pedro Mateus**, *ITQB NOVA and LS4FUTURE, NOVA University of Lisbon, Oeiras, Portugal*

**OC16** Arylamide glycofoldamers for targeting carbohydrate–protein interactions

10:50 **Catarina Maria**, *CQE-IMS, Universidade de Lisboa, Portugal*

**OC17** Design and synthesis of novel carbohydrate-based antibacterial agents to address antimicrobial resistance

**11:05-11:30**

**Coffee Break**

**11:30-12:20**

### **Session 3: (Bio)Synthesis, Structural Analysis, and Molecular Recognition (Part 2)**

**Chairs:** Manuel A. Coimbra & Olga Borges

11:30 **Lígia Rodrigues**, *CEB, University of Minho, Braga, Portugal*

**IL5** Unravelling the potential of microbes in the biosynthesis of carbohydrates

11:50 **André Oliveira**, *LAQV-REQUIMTE & CICECO, University of Aveiro, Portugal*

**OC18** Carbohydrate-rich wastewater as a source of short-chain organic acids through acidogenic fermentation

12:05 **Ana Saldanha**, *CIMO, LA SusTEC, Polytechnic Institute of Bragança, and LAQV-REQUIMTE, University of Aveiro, Portugal*

**OC19** Structural modulation of *Agaricus bisporus* polysaccharides by lactic acid fermentation and its biofunctional implications

**12:30-13:00**

**Flash Talks 2**

**13:00-14:30**

**Lunch**

**14:30-15:50**

**Session 4: Carbohydrates in Food Science and Agriculture (Part 1)**

Exploring the impact of carbohydrates on nutrition, gut fermentation, food safety, crop science, agri-food by-products valorization, sustainable agriculture, and seaweed farming

**Chairs:** Fernando Nunes & Sérgio Filipe

14:30 **Cláudia Nunes**, *CICECO, University of Aveiro, Portugal*

**IL6** Marine polysaccharides: Functional biomaterials for biomedical and food applications

14:50 **Aida Moreira da Silva**, *ESAC, Polytechnic University of Coimbra, Bencanta, Portugal*

**OC20** Cyclodextrins in food systems: Technological applications and functional perspectives

15:05 **Amélia Graça**, *LAQV-REQUIMTE, University of Aveiro, Portugal*

**OC21** Searching for sources of sweet-tasting oligosaccharides able to decrease sucrose content in foods

15:20 **Helena Laronha**, *LAQV-REQUIMTE, University of Aveiro, Portugal*

**OC22** The role of rhamnogalactan and fucogalactan in the cholesterol-lowering effects

**15:35-16:00**

**Coffee Break**

**16:00-17:20**

**Session 4: Carbohydrates in Food Science and Agriculture (Part 2)**

**Chairs:** Aida Moreira & Pedro Fernandes

16:00 **Miguel Cerqueira**, *INL – International Iberian Nanotechnology Laboratory, Braga, Portugal*

**IL7** Electrohydrodynamic processing for the design of micro and nanostructures based on polysaccharides

16:20 **Mário Bezerra**, *CQ-VR, University of Trás-os-Montes and Alto Douro, Vila Real, Portugal*

**OC23** Interactions between wine polysaccharides and bentonite: Implications for protein removal efficiency in model white wine solutions

16:35 **Mónica Jesus**, *LAQV-REQUIMTE, University of Porto, Portugal*

**OC24** Polysaccharides as modulators of procyanidins interactions with oral-cell models

16:50 **Paloma Lopes**, *LAQV-REQUIMTE, University of Aveiro, Portugal*

**OC25** Deciphering raspberry seed-derived biopolymers for food applications

17:05 **Tiago Durães**, *CQ-VR, University of Trás-os-Montes and Alto Douro, Vila Real, Portugal*

**OC26** Caloric reduction of sucrose-rich fruit products through an enzymatic approach

**17:30**

**Poster Session**

**18:00**

**GLYCOTwinning Meeting**

**20:00**

**Congress Dinner & Fado de Coimbra (Praxis)**



# Wednesday 17 September

**09:15-11:00**

## **Session 5: Glyc(omics) and Biomarker Discovery**

Unveiling novel glycoconjugates and their potential as biomarkers for diagnostics and precision medicine

**Chairs:** Amélia P. Rauter & Jesús Jiménez-Barbero

09:15 **Peter Seeberger**, *Max Planck Institute, Potsdam, and CTC-Center for the Transformation of Chemistry, Germany*

**PL3** Automated Glycan Assembly as Enabling Technology of Molecular Glycobiology

09:45 **Manfred Wuhrer**, *Leiden University Medical Center, The Netherlands*

**IL8** Human Glycomics and Glycoproteomics by Mass Spectrometry

10:05 **Yan Liu**, *Imperial College London, United Kingdom*

**IL9** Glycan Microarray Toolbox for Microbiome Research

10:25 **Luís Grilo**, *CIBB, University of Coimbra, Portugal*

**OC27** Cardiac Molecular Analysis Reveals Aging-Associated Metabolic Alterations Promoting Glycosaminoglycans Accumulation Via Hexosamine Biosynthetic Pathway

**10:40-11:00**

**Bruker Sponsored Talk:** Glycobiology & Glycoproteins

**11:00-11:30**

**Coffee Break**

**11:30-13:00**

## **Session 6: Carbohydrate-Based Materials for Medicine, Biotechnology, Industry, Heritage, and Environmental Sustainability**

Chairs: Ana Ardá & Manfred Wuhrer

11:30 **Mara Baga**, *Green and Sustainable Processes Laboratory, University of Coimbra, Portugal*

**IL10** Polymer Processing Strategies for Application in the Environment and Health

11:50 **José Gamelas**, *CIEPQPF, University of Coimbra*

**IL11** Nanocelluloses and Nanocellulose Films. Opportunities in the Conservation and Restoration of Historical Documents

12:10 **Jan Vicha**, *Centre of Polymer Systems, Tomas Bata University in Zlín, Czech Republic*

**OC28** Dialdehyde Polysaccharides for the Sustainable Synthesis of Multifunctional Conductive Biomaterials

12:25 **Olga Borges**, *CIBB, University of Coimbra, Portugal*

**OC29** Administration of a Sugar-Functionalized Chitosan/DNA Complex Vaccine Elicits Protective Immunity Against SARS-CoV-2 in Mice

**12:40-13:00**

**Awards Ceremony**

**13:00**

**Closing Session**