

International Joint Meeting GLUPOR15 & GLYCOTwinning 2025

PROGRAMME

Monday 15 September

08:00-09:00
Registration

09:00-09:15
Opening & Welcome Session

Marta Piñeiro (Official Representative of the Portuguese Chemical Society – SPQ)
Nuno Empadinhas, Elisabete Coelho, Filipa Marcelo, Angelina Palma (President of the Carbohydrate Group)

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

Chair: Nuno Empadinhas

10:00-11:00

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 (Presenters of **P01, P02, P04, P05, P06, P07, P08, P10, P11, P12, P28**)

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

12:20-13:00

Flash Talks 2 (Presenters of **P15, P16, P17, P18, P20, P21, P23, P24, P25, P26, P32**)

13:00-14:30

Lunch

14:30-15:35

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 & Miguel Cerqueira

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

A Legacy of Excellence: GLUPOR15 Launches Prestigious Prize for Young Scientists Honoring Portuguese Pioneer in Glycoscience: The GLUPOR Young Researcher **Amélia Pilar Rauter Award**

18:30

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 **Rui Rocha**, *Bruker, Portugal*

Bruker glycobiology solutions:

An integrated, comprehensive technology application suite making glycoscience accessible



11:00-11:30

Coffee Break

11:30-12:40

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

Chairs: Ana Ardá & Manfred Wuhrer

11:30 **Mara Braga**, *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 - Sponsored by *Pharmaceuticals* MDPI



pharmaceuticals

13:00

Closing Session