

Symposium Program

Monday 23. 9. 2024

- 13:00-18:00** Registration in the Smolenice Castle
- 14:00** Bus departure from Bratislava to Smolenice
- 18:10-18:15** Opening ceremony
Jaroslav Katrlík, Stanislav Kozmon
- Section 1 (Chair: Carme Rovira)*
- 18:15-18:55** PL1 *Celso Reis (University of Porto, Porto, Portugal)*
THE DIVERSITY AND FUNCTIONALITY OF THE
CANCER GLYCOME: ROLE IN ONCOGENIC
PROCESSES TO CLINICAL IMPLICATIONS
- 19:00** Welcome dinner

Tuesday 24. 9. 2024

- 7:30-9:00** Breakfast
- Section 2 (Chair: Celso Reis)*
- 9:00-9:40** PL2 *Christophe Len (CNRS, Paris, France)*
A TOUR AROUND THE GREEN CONTINUOUS FLOW
SYNTHESIS OF FURAN DERIVATIVES FROM
CELLULOSIC BIOMASS
- 9:40-10:00** OP1 *Alexei V. Demchenko (University of St. Louis, St. Louis, USA)*
FROM STEREOCONTROLLED GLYCOSYLATION TO
AUTOMATED CHEMICAL SYNTHESIS OF
CARBOHYDRATES

10:00-10:20 OP2 *Marlene C.S. Dal Colle (Max Plank Institute, Potsdam, Germany)*
RATIONALLY DESIGNED MUCIN-LIKE GLYCOHYDROGELS

10:20-10:40 Coffee Break

Section 3 (*Chair: M. Rita Ventura*)

10:40-11:10 IL1 *Anikó Borbás (University of Debrecen, Debrecen, Hungary)*
STEREOSELECTIVE SYNTHESIS OF TREHALOSE-TYPE α, α -THIODISACCHARIDES USING THIOL-ENE PHOTOCCLICK CHEMISTRY

11:10-11:30 OP3 *Mihály Herczeg (University of Debrecen, Debrecen, Hungary)*
SYNTHESIS AND BIOLOGICAL PROFILING OF SEVEN D-GLUCURONIC ACID CONTAINING HEPARINOID TRISACCHARIDES

11:30-11:50 OP4 *Alla Zamyatina (BOKU, Vienna, Austria)*
SYNTHETIC DISACCHARIDE-BASED PICOMOLAR TLR4 AGONISTS AS POTENTIAL IMMUNOTHERAPEUTICS: THE STRUCTURAL BASIS

11:50-12:00 ELICITYL (commercial lecture)

12:00-14:00 Lunch

Section 4 (*Chair: Christophe Len*)

14:00-14:40 PL3 *Bernd Nidetzky (Graz University of Technology, Graz, Austria)*
ENZYMOMOLOGY OF MICROBIAL METABOLISM OF C-GLYCOSYL COMPOUNDS

14:40-15:00 OP5 *Peter Gabko (Slovak Academy of Sciences, Bratislava, Slovakia)*
TURNING RIBOSE INTO ALKALOIDS:
STEREOSELECTIVE SYNTHESIS OF 5-SUBSTITUTED
1,2-DIHYDROXYINDOLIZIDINES AND –
PYRROLIZIDINES

15:00-15:10 FP1 *Erika Mezö (University of Debrecen, Debrecen, Hungary)*
SYNTHESIS OF IMINOSUGAR ANALOGS WITH
MORPHOLINE AND OXAZEPANE BACKBONE

15:10-15:30 Coffee Break

Section 5 (Chair: Lara Mahal)

15:30-16:00 IL2 *M. Rita Ventura (Universidade Nova de Lisboa, Lisboa, Portugal)*
A NOVEL FUNCTIONAL ASSAY FOR THE STUDY OF
NEW DRUG TARGETS IN MYCOBACTERIA

16:00-16:20 OP6 *Juan Uribe-Gomez (University of Galway, Galway, Ireland)*
LINEAR SUGAR-ENDING POLYETHYLENE GLYCOL:
A POTENTIAL MATERIAL FOR NEXT-GENERATION
IMPLANTS

16:20-16:40 OP7 *Gavin J. Miller (Keele University, Keele, UK)*
SWEET TARGETS: THE SEARCH FOR
GLYCOCONJUGATE PROBES AND INHIBITORS OF
GDP MANNANOSE DEHYDROGENASE FROM
PSEUDOMONAS AERUGINOSA

16:40-16:50 FP2 *Adria Alcaide Jimenez (IMBM-CSIC, Barcelona, Spain)*
ENZYMATIC INITIATION AND POLYMERIZATION
OF GROUP 2 BACTERIAL CAPSULES

17:00-18:45 Poster Session

19:00 Dinner

Wednesday 25. 9. 2024

7:30-9:00 Breakfast

Section 6 (Chair: Bernd Nidetzky)

- 9:00-9:40** PL4 *Carme Rovira (ICREA, Barcelona, Spain)*
NON-CLASSICAL GLYCOSYLATION REACTION
MECHANISMS: A MODELING APPROACH
- 9:40-10:00** OP8 *Robert J. Woods (University of Georgia, Athens, USA)*
AUTOMATING THE DESIGN OF GLYCOMIMETIC
AGENTS
- 10:00-10:20** OP9 *Stanislav Kozmon (Slovak Academy of Sciences, Bratislava, Slovakia)*
IN SILICO AND EXPERIMENTAL STUDY OF THE
XYLOGLUCAN ENDOTRANSGLYCOSYLASE (XET)
INTERACTIONS
- 10:20-10:30** FP3 *Jan Beránek (University of Chemistry and Technology, Prague, Czechia)*
USING ALCHEMICAL FREE ENERGY
CALCULATIONS TO PREDICT PROTEIN-
SACCHARIDE RELATIVE BINDING AFFINITY
- 10:30-10:50** Coffee Break
- ### **Section 7** (Chair: Anikó Borbás)
- 10:50-11:20** IL3 *Cristina Airoidi (University of Milano-Bicocca, Milano, Italy)*
NMR TOOLS FOR THE IDENTIFICATION AND
DEVELOPMENT OF CARBOHYDRATE-BASED
BIOACTIVE COMPOUNDS

- 11:20-11:40** OP10 *Martin Kurfířt (Czech Academy of Sciences, Prague, Czechia)*
 FLUORINE-INDUCED STRENGTHENING OF C–H/ π INTERACTION AS AN IMPORTANT DRIVING FORCE BEHIND THE RECOGNITION OF FLUORINATED DISACCHARIDES BY WHEAT GERM AGGLUTININE
- 11:40-12:00** OP11 *Marko Anderluh (University of Ljubljana, Ljubljana, Slovenia)*
 FIRST-IN-CLASS NANOMOLAR INHIBITORS OF GALECTIN-8 N-TERMINAL DOMAIN BIND VIA NON-CANONICAL CATION- π INTERACTIONS
- 12:00-12:10** FP4 *Jindřich Karban (Czech Academy of Sciences, Prague, Czechia)*
 FERROCENE-MODIFIED DISACCHARIDES AS GALECTIN INHIBITORS
- 12:10-12:20** FP5 *Michal Hricovíni (Slovak Academy of Sciences, Bratislava, Slovakia)*
 NMR AND DFT ANALYSIS OF PHOTOCHEMICALLY-INDUCED PROCESS IN GLUCOSE-BASED GLYCOCONJUGATE
- 12:20-14:00** Lunch
- 14:30-22:00** Half day trip + Social dinner

Thursday 26. 9. 2024

- 7:30-9:00** Breakfast
- Section 8** (*Chair: Iain B.H. Wilson*)
- 9:00-9:40** PL5 *Lara Mahal (University of Alberta, Edmonton, Canada)*
 ADDING A LITTLE SUGAR: INTEGRATING GLYCOMICS INTO MULTI'OMIC ANALYSIS BRINGS NEW INSIGHTS

- 9:40-10:00** OP12 *Stefan Mereiter (Austrian Academy of Sciences, Vienna, Austria)*
TUMOR SIALYLATION CONTROLS EFFECTIVE
ANTI-CANCER IMMUNITY IN BREAST CANCER
- 10:00-10:20** OP13 *Natália Košútová (Slovak Academy of Sciences, Bratislava, Slovakia)*
EXOSOMES AS POTENTIAL PROSTATE CANCER
BIOMARKERS FOR THE LIQUID BIOPSY TESTING
- 10:20-10:40** FP6 *Andrea Pinkeová (Glycanostics, Bratislava, Slovakia)*
THE POTENTIAL OF LECTIN-LINKED
IMMUNOSORBENT ASSAYS IN GLYCAN-BASED
DIAGNOSTICS OF ONCOLOGICAL DISEASES
- 10:40-11:00** Coffee Break
- Section 9 (Chair: Daniel Bojar)**
- 11:00-11:30** IL4 *Vered Padler-Karavani (Tel Aviv University, Tel Aviv, Israel)*
IMMUNOTHERAPY TARGETING CANCER
GLYCOSYLATION
- 11:30-12:00** IL5 *Zuzana Pakanová (Slovak Academy of Sciences, Bratislava, Slovakia)*
MASS SPECTROMETRY ANALYSIS OF
GLYCOCONJUGATES IN DIAGNOSTICS AND
BIOMARKER DISCOVERY
- 12:00-12:10** FP7 *Paula Peinsipp (University of Graz, Graz, Austria)*
ALTERNATIVES TO ACYCLOVIR TO COMBAT HSV-1
INFECTION
- 12:10-12:20** FP8 *Elisa Talker (University of Graz, Graz, Austria)*
PHAGE DISPLAY-DERIVED VNARS (VARIABLE NEW
ANTIGEN RECEPTORS) AGAINST A WELL-DEFINED
GLYCOSAMINOGLYCAN STRUCTURE
- 12:20-14:00** Lunch

Section 10 (Chair: Zuzana Pakanová)

- 14:00-14:30** IL6 *Iain B.H. Wilson (BOKU, Vienna, Austria)*
INVERTEBRATE N-GLYCOSYLATION -
STRUCTURES & INTERACTIONS
- 14:30-14:50** OP14 *Katharina Paschinger (BOKU, Vienna, Austria)*
MALDI-TOF MS AS A TOOL FOR MARINE
GLYCOMICS
- 14:50-15:10** OP15 *Alba Hykollari (BOKU, Vienna, Austria)*
NEW INSIGHTS INTO THE N-GLYCOME FROM THE
INVERTEBRATE DICTYOSTELIUM SPECIES
- 15:10-15:20** FP9 *Friedrich Altmann (BOKU, Vienna, Austria)*
GREEN ALGAE – THE MASTERS OF GLYCO-
DIVERSITY
- 15:20-15:40** Coffee Break

Section 11 (Chair: Vered Padler-Karavani)

- 15:40-16:10** IL7 *Daniel Bojar (University of Gothenburg, Gothenburg, Sweden)*
WHITE GOLD – DISCOVERING AND ANALYZING
NEW MILK OLIGOSACCHARIDES
- 16:10-16:30** OP16 *Ran Xie (Nanjing University, Nanjing, China)*
PAN-SCALE MULTIDISCIPLINARY STUDIES OF
GLYCANS
- 16:30-16:40** FP10 *Jon Lundström (University of Gothenburg, Gothenburg, Sweden)*
ELUCIDATING THE GLYCAN-BINDING SPECIFICITY
AND STRUCTURE OF CUCUMIS MELO
AGGLUTININ, A NEW R-TYPE LECTIN
- 17:15** Farewell party including poster award

Friday 27. 9. 2024

8:00-9:30 Breakfast

Section 12 (*Chair: Cristina Airoidi*)

10:00-10:20 OP17 *Maroš Krchňák (Slovak Academy of Sciences, Bratislava, Slovakia)*
COMPARISON AND APPLICATIONS OF LC-MS
WORKFLOWS IN N-GLYCOMICS

10:20-10:30 FP11 *Juvisan Medalith Aguedo Ariza (Slovak Academy of Sciences, Bratislava, Slovakia)*
GLYCOBIOMARKER DISCOVERY FOR
COLORECTAL CANCER DIAGNOSIS

10:30-10:40 FP12 *Paras Kundalia (Slovak Academy of Sciences, Bratislava, Slovakia)*
A HOLISTIC APPROACH TO OPTIMIZE FACTORS
CONTRIBUTING TO VARIABILITY IN
GLYCOPROTEIN MICROARRAY ANALYSIS

10:40-10:45 Closing ceremony
Jaroslav Katrlík, Stanislav Kozmon

11:00-11:45 Lunch

12:00 Bus departure to Bratislava