

27th Austrian Carbohydrate Workshop

Graz, 15th – 16th February 2024

Graz University of Technology, HS H 'Ulrich Santner'
Kopernikusgasse 24, Chemistry



Program

11:00 – 12:00 Arrival coffee, drinks and snacks

12:00 – 12:10 Welcome, Tanja Wrodnigg

12:10 – 13:25 Session 1 chair: Martin Thonhofer

Enzymatic β -elimination in natural product O- and C-glycoside deglycosylation
Bitter Johannes, Pfeiffer Martin, Borg Annika, Kuhlmann Kirill, Pavkov-Keller Tea,
Sánchez-Murcia Pedro, Nidetzky Bernd
TU Graz, IBBE

Synthesis of L-Iduronic Acid-Type 1-N-Iminosugars as Potential α ,L-Iduronidase Modulators
Taglietti Lorenzo, La Ferla Barbara
University of Milano-Biocca, Italy

Biomarker detection: from total serum to tissue specific N-glycan analysis.Matteo Ret Davide, Alessio Gentile, Daniel García de Otazo Hernández, Lisa Ying, Veronica Monti, Haidi Jakovic, Philipp Gritsch, Arvand Haschemi, Eva Untersmayr
TU Wien, MedUni Wien

UDP-GlcNAc-2-epimerase MnaA, an enzyme central to glycoconjugate biosynthesis
Hager-Mair Fiona, Stefanovic Cordula, Legg, Ender, Evans, Schäffer Christina
BOKU Wien

LytR-CpsA-Psr glycopolymer transferases, an essential step in Gram-positive cell wall assembly

Stefanovic Cordula, Hager-Mair Fiona, Bruckner Michael, Blaukopf Markus, Schäffer Christina
BOKU Wien

Synthesis of probes and inhibitors for SCWP mediated S-layer glycoprotein anchoring

Bruckner Michael, Blaukopf Markus, Kosma Paul, Schäffer Christina, Falkner Clara
BOKU Wien

13:25 – 14:00 COFFEE BREAK

14:00 – 14:40 1st Walther Schmid Lecture sponsored by GÖCH

Deoxyfluorinated rare sugars to study the pentose phosphate pathway

Katharina Pallitsch

Uni Wien

14:40 – 15:30 Session 2 chair: Christian Stanetty

Isofagomine versus Glycosidases: Remarkable Shifts in Inhibition Profiles by Simple N-Modification

Prasch Herwig, Culum André, Dorn Tobias, Fischer Roland, Gardić Ema, Schmutz Franziska, Steinbrugger Magdalena, Stütz Arnold, Thonhofer Martin, Weber Patrick, Wrodnigg Tanja
TU Graz, IBioSys

Efficient synthesis of natural product di-C-glucosides by glycosyltransferases

Li Tuo, Borg Annika, Nidetzky Bernd
TU Graz, IBBE

Synthesis of new carbohydrate-based ligands for the lectin CLEC-2

Capellato Sara, Pfrengle Fabian
BOKU Wien

Boron allylation reactions and the synthesis of nonulosonic acids

Gritsch Philipp
TU Wien

15:30 – 16:00 COFFEE BREAK

16:00 – 17:30 Session 3 chair: Thisbe Lindhorst

Carbohydrate-Based Nanodiscs

Culum Andre, Steinhauser Alexandra, Keller Sandro, Vargas Carolyn, Tutz Sarah, Thonhofer Martin, Wrodnigg Tanja
TU Graz, IBioSys, Uni Graz

Using Cyclodextrin to Fabricate Asymmetric Lipid Membranes

Pabst Georg, Eicher Barbara, Doktorova Milka, Frewein Moritz P.K., Heberle Frederick A.,
Marquardt Drew, Piller Paulina, Semeraro Enrico F.
Uni Wien

Recognition of highly branched N-glycans of the porcine whipworm by the immune system

Wilson Ian, Paschinger Katharina
BOKU Wien

Towards the synthesis of rhamnogalacturonan II side chain B fragments

Obleser Katharina, Pfrengle Fabian
BOKU Wien

Synthesis of oligosaccharides related to plant rhamnogalacturonan-II

Osswald Uwe
BOKU Wien

How to resolve complex carbohydrate NMR spectra

Kählig Hanspeter, Walcher Stephanie, Hager-Mair Fiona F., Stadlmann Johannes,
Schäffer Christina
University of Vienna, Organic Chemistry

Process Chemistry at Thermo Fisher Scientific

Gintner Manuel
Thermo Fisher Scientific

17:30 – 18:00

Discussion, Tanja Wrodnigg

Generell topics of the Austrian Network of Carbohydrates and Glycoconjugates
Future Meetings, Conferences and Symposia, Glycoperspectives

Group picture of all participants of 27th ACWS

18:00: Poster Session and Social Get Together with Buffet and Drinks

Exploring Multivalent Oligosaccharide Ligands in Galectin-4 Interactions

Krén Vladimír,
Institute of Microbiology of the Czech Academy of Sciences, Prague

Highly Functionalized Diaminocyclopentanes: Potent and Selective O-GlcNAcase Inhibitors

Weber Patrick, Meszaros Z., Bojarova P., Kren V., Stütz A. E., Thonhofer M., Wrodnigg T.
M.
University of Leiden, The Netherlands

Comparative N-Glycosylation Analysis in Human Serum: Insights into COVID-19, Long COVID, and ME/CFS

Gentile Salvatore Alessio, Ret Davide, Rohrhofer Johanna, Koidl Larissa, Jakovic Haidi, García de Otazo Hernández Daniel, Ying Lisa, Untersmayr Eva
MedUni Wien

Covalent protein immobilization on modified cellulose for n-glycan purification

Jakovic Haidi, Gentile Alessio, García de Otazo Hernández Daniel, Ying Lisa, Untersmayr Eva, Ret Davide
TU Wien

NHC Catalysed Carbocyclisation of Pentoses via Stetter Reaction

Suster Christoph, Stanetty Christian
TU Wien

Synthesis of selectively protected 3-iodo-Kdo-fluoride donors

Goto Takaaki, Kosma Paul
BOKU Vienna,

A robust quantification method of sialic acids and AGES precursors

Garcia de Otazo Hernández Daniel, Salvatore Gentile Alessio, Ying Lisa, Jakovic Haidi, Untersmayr Eva, Ret Davide
TU Wien, MedUni Wien

Edible Bird's Nest: N-Glycosylation pattern and quantitative analysis of Sialic Acid

Ying Lisa, Gentile Alessio Salvatore, Garcia de Otazo Hernandez Daniel, Jakovic Haidi, Untersmayr Eva, Gritsch Philipp, Ret Davide
TU Wien

Synthetic and Biological Elaborations of Novel N-Modified Isofagomines

Steinbrugger Magdalena, Culum Andre, Dorn Tobias, Fischer Roland, Gardić Ema, Prasch Herwig, Schmutz Franziska, Stütz Arnold E., Thonhofer Martin, Weber Patrick, Wrodnigg Tanja M.
TU Graz, IBioSys

Quaternization of 2-hydroxyethyl cellulose - characterization and cytotoxicity

Jurko Lucija, Makuc Damjan, Štern Alja, Žegura Bojana, Plavec Janez, Bošković Perica, Kargl Rupert
Laboratory for Characterization and Processing of Polymers

Preliminary Studies about Iminosugar-Modified Cellulose as Novel Enzyme Inhibitors

Wilding Tanja, Dorn Tobias, Prasch Herwig, Thonhofer Martin, Koschella Andreas, Wrodnigg Tanja M.
TU Graz, IBioSys

Alternative Methods for Covalent Crosslinking of Alginate

Loibner Philipp, Kargl Rupert, Stana Kleinschek Karin
TU Graz, IBioSys



Friday, 16th February 2024

9:00 – 9:30 Morning coffee

9:30 – 10:10 Guest Lecture

Cyclic sulfates and sulfamidates: Versatile Chemical Functionalities for Targeting Glycosidases

Marta Artola Perez de Azanza

University of Leiden

10:10 – 11:10 Session 4 chair: Paul Kosma

Automatic Solid-Phase Synthesis of Oligogalactans for the Study of Plant-related Galatosyltransferases

Pasini Irene, Ruprecht Colin, Pfrengle Fabian
BOKU Wien

Synthesis of non-natural sugar alcohols as potential phase change materials via dimerization strategy

Standfest Christoph
TU Wien

Efficient Stereoselective synthesis of anomeric β -manno phosphates

Monti Alessandro, Zamyatina Alla
BOKU Vienna

Towards zwitterionic insect glycans for dipteran glycan array

Sarkar Biswajit, Vangala Madhuri, Wilson Iain, Zamyatina Alla
BOKU Vienna

Efficient one pot multi-enzyme cascade for gram scale synthesis of pseudouridine

Andrej Ribar
TU Graz, IBBE

11:10 – 11:45 COFFEE BREAK

11:45 – 13:15 EPNOE Session 5, chair: Karin Stana Kleinschek

Polysaccharides: from searching to publication

Bleha Roman, Ivanišová Eva, Sinica Andrej
UCT Prag

Investigation of polysaccharides as substitutes for synthetic benchmark materials in wastewater treatment

Leonhartsberger Simon, Mann Karl-Jürgen, Kozich Martin, Stanetty Christian, Mihovilovic Marko D.
TU Wien

Photoresponsive Covalently Linked Dextran Networks – Towards Functional Hydrogels

Knaipp Konstantin, Kargl Rupert, Stana Kleinschek Karin, Makuc Damjan, Zagar Ema, Plavec Janez, Gescheidt-Demner Georg
TU Graz, IBioSys

3D printing of polysaccharide based bioinks with in situ bivalent ionic crosslinking

Lackner Florian, Peharda Ana, Steindorfer Tobias, Kargl Rupert, Mohan Tamilselvan, Stana Kleinschek Karin
TU Graz, IBioSys

Combining Mono- and Polysaccharides: Preliminary Studies about the Modification of Chitosan with Small Molecules and Enzyme Inhibitors

Dorn Tobias, Prasch Herwig, Steindorfer Tobias, Thonhofer Martin, Culum Andre, Schmutz Franziska, Stana Kleinschek Karin, Wrodnigg Tanja, Kargl Rupert
TU Graz, IBioSys

3D printed porous nanocellulose-protein scaffolds for tissue engineering applications

Mohan Tamilselvan, Dobaj Štiglic Andreja, Nagaraj Chandran, Kargl Rupert, Stana Kleinschek Karin
TU Graz, IBioSys

Crosslinking of cellulose nanofibrils through amide bonds

Kargl Rupert, Schober Katharina, Brandtner Monika, Bučak Gasser David, Bračič Matej, Steindorfer Tobias
TU Graz, IBioSys

13:15

Closing, Tanja Wrodnigg

**Thank you very much for coming
and
have a safe trip home!**

See you @ 28th ACWS – Wien

