

Program:

- 8.00 - 9.00 Registration, poster installation
9.00 - 9.15 Opening, *Vladimír Křen*

Invited Lectures, Oral Communications

Chairperson: Karel Bezouška

- 9.15 - 9.30 Drašar P.: *Laudatio*: Prof. Josef Pacák
9.30 - 10.00 Chmielewski M.: Anomeric hydroperoxides; synthesis, enantioselective epoxidation.
10.00 - 10.30 Sauerzapfe B., Gasteier P., Křenek K., Wakarchuk W.W., Křen V., Möller M., Elling L.: PEG-bound oligosaccharides as biomolecular recognition structures for the biomaterial research.

Coffee Break***Invited Lectures, Oral Communications***

Chairperson: Marek Chmielewski

- 11.00 - 11.25 Vršanská M., Kolenová K., Puchart V., Biely P.: Differences in mode of action of microbial endoxylanases.
11.25 - 11.50 Kopecký V. Jr., Pazderka T., Baumruk V.: Raman optical activity of carbohydrates and glycoproteins.
11.50 - 12.15 Hricovíni M.: Explorations of heparin-oligosaccharides-proteins interactions by NMR and molecular modeling.
12.15 - 12.30 Adam J., Pokorná M., Kostlánová N., Šulák O., Kříž Z., Imberty A., Koča J., Wimmerová M.: Molecular modelling as a glycobiochemist's best friend - Structure-functional and computational analysis of lectin-saccharide interaction on the way to protein engineering.

Poster Session, Lunch***Invited Lectures, Oral Communications***

Chairperson: Mária Vršanská

- 14.00 - 14.20 Kniežo L.: Stereoselective synthesis of C-(1→3)-linked disaccharides as non-hydrolysable epitopes of glycoconjugates.
14.20 - 14.35 Baráth M., Petrušová M., Novotná L., Svoboda J., Fišerová A., Křen V., Petruš L.: Synthesis and some biological properties of a non-ionogenic, pentakis-O-tetradecylated lipid A mimic.
14.35 - 14.50 Zelenka K., Trnka T., Drašar P.: Porphyrins containing glycosylated steroid: synthesis and self-assembly and electrochemical studies.
14.50 - 15.05 Vojtech M., Petrušová M., Petruš L.: New synthetic approaches to C-D-galactofuranosyl compounds.

Coffee Break

Chairperson: *Ladislav Kniežo*

- 15.40 - 16.00 Bezouška K., Plíhal O., Sklenář J., Hofbauerová K., Novák P., Man P., Pompach P., Kavan K., Ryšlavá H., Weignerová L., Charvátová-Pišvejcová A., Křen V.: Large propeptides of fungal β -*N*-acetylhexosaminidases as novel enzyme regulators: the role of propeptide *N*- and *O*-glycosylation in the reconstitution of enzymatic activity and in the initial interaction of the propeptide with the enzyme.
- 16.00 - 16.15 Slámová K., Bojarová P., Gažák R., Macková M., Křen V.: β -*N*-Acetylhexosaminidase from *Talaromyces flavus* can accept highly modified substrates: New ways to enzymatic synthesis of glycomimetics.
- 16.15 - 16.30 Puchart V., Mastihubová M., Biely P.: Polysaccharide deacetylases of carbohydrate esterase family 4 – unique metalloenzymes.
- 16.30 - 16.45 Vančurová M., Pompach P., Kavan D., Nálezková M., Žídek L., Cimburek Z., Hovorka O., Bezouška K.: New carbohydrate mimetics protecting CD69⁺ killer cells from apoptosis.
- 16.45 – 17.00 Křenek K., Krist P., Navrátil M., Hofbauerová K., Bezouška K., Křen V.: GlcNAc-dimers aggregate NK-cell receptors: Glycomimetics as a “molecular ruler”.
- 17.00 - 17.15 Malinová L., Lameignere E., Sláviková M., Varrot A., Imberty A., Wimmerová M.: Lectin BclA -Characterization of binding properties.
- 17.15 - 17.30 Špániková S., Biely P.: Novel microbial carbohydrate esterase involved in plant cell wall digestion.
- 17.30 - 17.45 Veselá A., Ederová J., Synytsya A., Čopíková J.: Analysis of β -glucans from different sources by thermal analysis.
- 17.45 - 18.00 Synytsya A., Synytsya A., Blafková P., Maryška M., Ederová J., Spěvaček J., Čopíková J., Volka K., Král V.: Solid aggregates of porphyrin macrocycles on chitosan scaffold: preparation and characterisation.
- 18.00 - 18.05 Closing, *Vladimír Křen*

Poster Session:

1. α -L-Fucosidase from the bacterial strain *Paenibacillus thiaminolyticus*
Benešová E., Lipovová P., Králová B.
2. Synthesis of regioisomers of monosubstituted β -cyclodextrin derivatives as modifiers of porous silicon surface for chemosensor applications
Beran A., Tišlerová I., Jindřich J.
3. Synthesis of GlcNAc-TS mimetic part of the potential transition state analog inhibitors of glycosyltransferases
Csúsz B., Hirsch J., Kooš M., Tvaroška I.
4. Synthesis of dimer derivatives of cyclodextrins by metathesis of monoallyl derivatives
Diviš M., Jindřich J.
5. Epoxide migration and pseudo-epoxide migration of 1,6:2,3- and 1,6:3,4-dianhydro- β -D-hexopyranoses
Džoganová M., Buděšínský M., Trnka T., Černý M.
6. Studies on hydrolysis kinetics of acetal linkers on glukon derivatives
Farkaš P., Bystrický S.
7. Synthesis of 3¹-O-alkyl derivatives of β -cyclodextrin using Wittig reaction
Hezký P., Jindřich J., Kusák M.
8. Microwave-assisted transformation of reducing saccharides
Hricovíniová Z.
9. Computational study on distortion of a glycosidic bond in a donor substrate bound at retaining glycosyltransferase LgtC
Kóňa J., Kozmon S., Tvaroška I.
10. Investigation of binding specificity of NK cell receptors using mass spectrometry, inhibition assays, and oligosaccharides arrays
Kavan D., Bezouška K., Mrázek H., Mihók L., Pompach P., Neumann J., Novák P., Havlíček V.
11. Glycosyl azides as new donors for glycosidases
Křen V., Bojarová-Fialová P., Petrásková L.
12. *Phanerochaete chrysosporium* glucuronoyl esterases: gene expression in different fungi
Křupalová M., Špáníková S., R. P. de Vries, Biely P.
13. Sugar chains protect proteins against radicals generated from xenobiotics. A novel role for carbohydrate moieties in glycoproteins
Kubínková Z., Stiborová M., Martínek V., Sklenář J., Šulc M., Frei E. & K. Bezouška K.
14. Immunogenicity of synthetic oligosaccharide-protein conjugate
Libjaková L., Bystrický S., Paulovičová E.
15. Study of enzymatic acylation of methyl α -D-glucopyranoside by phenolic acids and their non-phenolic analogues
Mastihubová M., Mastihuba V.

16. Induction of extracellular glycosidases of capsular strain of the yeast *Cryptococcus laurentii*
Mészárosová C., Dudíková J., Kolarova N.
17. Regioselective enzymatic feruloylation of reducing monosaccharides
Morávková Z., Mastihubová M.
18. D-Glucosamine - bile acid conjugates
Nováková Z., Tomanová J., Drašar P.
19. Sorption of PCP by cell wall β -D-glucan isolated from *Saccharomyces cerevisiae*
Pajtinka M., Kogan G., Sejáková Z., Dercová K.
20. The binding properties of the H5N1 influenza virus neuraminidase
Raab M., Tvaroška I.
21. Preparation of mono-O-substituted α -cyclodextrins
Řezanka M., Rudovská I., Jindřich J.
22. Simple carbasugars from *Streptomyces lincolnensis* DSM 40355
Sedmera P., Halada P., Pospíšil S.
23. Glycals and their use in preparation of 2-deoxyglycosides of lupane triterpenoids
Spáčilová P., Sarek J., Rudovská I., Hajduch M., Svobodová X.
24. Preparation of glycosyl donors based on D-mannosamine for the synthesis of oligosaccharides with (1 \rightarrow 4)glycosidic linkage
Smrček J., Veselý J., Jindřich J.
25. A potential transition-state analog for glycosyltransferases: DFT study of conformational behavior
Sihelníková L., Tvaroška I.
26. Galactosylation of nucleoside analogues by cold-active β -galactosidase
Spiwok B., Riedl J., Dvořáková H., Votruba I., Holý A., Králová B.
27. Galectin-like protein from *Ralstonia solanacearum*
Šulák O., Kostlánová N., Mitchell E. P., Imberty A., Wimmerová M.
28. Analysis of lipopolysaccharide (LPS) antigens of *Vibrio cholerae* O135 and O34 isolated from Slovak rivers
Vráblová J., Bystrický S., Seman M.
29. Studies on the inducibility, properties and synthetic capability of fungal α -N-acetylgalactosaminidase
Weignerová L., Kupčíková E., Filipi T., Manglová D., Bezouška K., Křen V.
30. Stereoselective synthesis of 3-deoxy-3-(α -D-glucopyranosylmethyl)-D- and L-fagomine
Werner L., Kniežo L.