

## Program workshopu

### Nedeľa, 21. september

16:00 – 18:30 Príchod, registrácia a ubytovanie účastníkov  
19:00 – 22:00 Úvodné stretnutie

### Pondelok, 22. september

9:00 – 9:20 Otvárací ceremoniál  
(I. Zahradník, I. Tvaroška, J. Hirsch)

Plenárne prednášky (PL)  
Pozvané prednášky (IL)  
Krátke ústne oznámenia (OP)

*Predsedaajúci:* L. Petruš

9:20 – 10:10 PL *Olivier R. Martin*  
Sugar analogs with nitrogen in the ring: new synthetic approaches, novel biological applications

10:10 – 10:40 IL *Mitsuji Yamashita, Takashi Aoki, Satoru Ito, Keisuke Ogawa, Nobuhisa Ozaki, Michio Fujie, Gang Yu, Kengo Aoshima, Masaki Sugiyama, Nao Kamikage, Junko Yamashita, Yasuo Takehara, Harumi Sakahara, Hisao Takayanagi, Tatsuo Oshikawa, Sofie Laurent, Carmen Burtea, L. Vander Elst, Robert N. Muller*  
Research on cancer finding and chemotherapy at the early stage – syntheses and evaluations of novel sugar-ball-dendrimer MRI contrast agents and phospho sugars by sugar modification

10:40 – 11:10 Prestávka

*Predsedaajúci:* P. Kováč

11:10 – 11:40 IL *Ladislav Petruš, Michal Vojtech, Mária Petrušová, Božena Pribulová, Erika Lattová, Hélène Perreault*  
Study of the competitive five- versus six-membered ring closure addition reactions using a cascade reaction sequence

11:40 – 12:00	OP	<i>Nikolay N. Kondakov, Vadim V. Kachala, Polina I. Abronina, Leonid O. Kononov</i> Small changes in aglycon structure may influence the outcome of glycosylation
12:00 – 14:00		Obedná prestávka  <i>Predseda júci:</i> I. B. H. Wilson
14:00 – 14:50	PL	<i>David R. Rose</i> Structures of glycosidases in human health and disease
14:50 – 15:20	IL	<i>Mohamed Ait Amer Mezianne, Douglas A. Kuntz, Heather Strachan, Stanislav Kozmon, Juraj Kona, John Glushka, Smita Thohbani, Igor Tvaroška, David R. Rose, Kelley Moremen, G.-J. Boons, Aloysius Siriwardena</i> Is natural product mimicry an effective strategy for the design of inhibitors of oligosaccharide-processing enzymes?
15:40 – 16:00	OP	<i>Juraj Kóňa, Igor Tvaroška</i> Structural differences in the active sites of Golgi alpha mannosidase II and alpha lysosomal mannosidase: Insights from homology modeling, docking and pKa calculations
16:00 – 16:30		Prestávka  <i>Predseda júci:</i> D. R. Rose
16:30 – 17:10	PL	<i>Iain B. H. Wilson</i> How is a worm more complex than a fly: comparative N-glycomics and anti-carbohydrate antibody cross-reactivity
17:10 – 17:40	IL	<i>Yuko Yoneda, Kurt Mereiter, Christian Jaeger, Lothar Brecker, Paul Kosma, Thomas Rosenau, Alfred French</i> Hydrophobic vs. hydrophilic forces in an analog of cellotetraose: cyclohexyl 4'-O-cyclohexyl $\beta$ -D-cellobioside
17:40 – 18:00	OP	<i>Ivan Raich, Jakub Kaminský, Vladimír Setnička</i> Prediction of chiroptical properties of carbohydrates
18:00 – 18:20	OP	<i>Vojtěch Spiwok, Igor Tvaroška</i> Free energy modelling of carbohydrate conformations using metadynamics
19:00		Večera

## Utorok, 23. september

*Predsedajúci: V. Farkaš*

- 9:00 – 9:50 PL *Harry Brumer*  
Mechanisms and applications of xyloglucan-active enzymes
- 9:50 – 10:20 IL *Maria Hrmova, Gustav Vaaje-Kolstad, Andrew J. Harvey, Vladimír Farkaš, Geoffrey B. Fincher*  
Xyloglucan endo-transglycosylases from barley: Reaction mechanism and molecular structure
- 10:20 – 11:40 Prestávka
- Predsedajúca: M. Hrmova*
- 10:40 – 11:00 OP *Ondřej Kosík, Vladimír Farkaš*  
Polysaccharide microarrays for transglycosylase screening
- 11:00 – 11:20 OP *Vladimír Farkaš*  
Transglycosylation – a universal principle in cell wall formation in plants and fungi
- 11:20 – 11:40 OP *Pavol Janega, Peter Celec, Andrea Urbanová, Andrea Černá, Pavel Babál*  
Molecular regulation of protein sialylation is changed in the neoplastic transformed thyroid gland tissue
- 12:00 – 14:00 Obedná prestávka
- Predsedajúci: H. Brumer*
- 14:00 – 14:50 PL *Peter Biely*  
Carbohydrate esterases – emergence of new biocatalysts
- 14:50 – 15:10 OP *Miroslava Ďuranová, Silvia Špániková, Han A. B. Wösten, Ronald P. de Vries, Peter Biely*  
Two glucuronoyl esterases of *Phanerochaete chrysosporium*
- 15:10 – 15:40 Prestávka
- Predsedajúci: V. Křen*
- 15:40 – 16:10 IL *Katarína Kolenová, Ronald P. de Vries, Henrik Stålbrand*  
Comparison of three *Aspergillus nidulans* endo-beta-mannanases

- 16:10 – 16:30 OP *Rita Elek, Teréz Barna, Ágnes Hubert, Csaba Fekete, Gyula Batta, László Kiss, József Kukolya*  
Transformation of *Thermobifida fusca*  $\beta$ -D-mannosidase to mannosynthase by site-directed mutagenesis
- 16:30 – 16:50 OP *Vladimír Pätoprstý, Igor Tvaroška, Vladimír Kováčik, Rina Saksena, Roberto Adamo, Pavol Kováč*  
Electrospray ion trap fragmentation of synthetic analogs of the tetrasaccharide side chain of the *Bacillus anthracis* exosporium major glycoprotein
- 17:00 – 18:30 Plagátové oznámenia
- 19:00 Večera

### Streda, 24. september

*Predsedajúci:* O. R. Martin

- 9:00 – 9:50 PL *Péter Fügedi*  
Targeting the molecular diversity of heparin and heparan sulfate by chemical synthesis
- 9:50 – 10:20 IL *Christian Vogel, Heike Otero Martinez, Udo Kragl*  
Synthesis of deoxyribofuranosyl – spacer – C-nucleosides
- 10:20 - 10:50 Prestávka
- 10:50 – 11:20 IL *Neil P. Price, Anthony A. Adeuya, Terence Whitehead*  
Carbohydrate metabolism in bifidobacteria; human symbiotic bacteria.
- 11:30 – 12:30 Obed
- 13:00 – 13:30 Záverečný ceremoniál