

PROGRAM

8:00 - 9:00 REGISTRATION, POSTER INSTALLATION

9:00 - 9:15 OPENING

INVITED LECTURES

Chairperson: Karel Bezouška

9:15 - 9:50 THE GLYCOSYLATION OF PREGNANCY-ASSOCIATED GLYCOPROTEINS IN THE RUMINANT PLACENTA

Karl Klisch

9:50 - 10:20 CELL WALL POLYSACCHARIDES - VULNERABLE PART OF MYCOBACTERIAL "PROTECTIVE COAT"

Pauline Peltier, Martina Beláňová, Petronela Dianišková, Roukun Zhou, Ruixiang Blake Zheng, Todd L. Lowary, Caroline Nugier-Chauvin, Vincent Ferrières, Richard Daniellou, **Katarína Mikušová**

10:20 - 10:45 *COFFEE BREAK*

LECTURES, ORAL COMMUNICATIONS

Chairperson: Marek Šebela

10:45 - 11:05 DIMERIC THIOUREA LINKED AMINOSUGARS ARE MOLECULAR SWITCHES THAT TRIGGER THE ANTITUMOR POTENTIAL OF NATURAL KILLER CELLS LINKING INNATE AND ADOPTIVE IMMUNITY

Karel Bezouška, Karel Křenek, Pavla Bojarová, Helena Pelantová, Hynek Mrázek, Daniel Kavan, Anna Fišerová, Vladimír Křen

11:05 - 11:25 FIBRINOGEN-RELATED PROTEINS/LECTINS IN TICKS

Ján Štěrba, Petr Man, Vojtěch Kovář, Jarmila Dupejová, Miroslav Fišer, Martin Strohalm, Daniel Kavan, Petr Kopáček, Marie Vancová, Vladimír Havlíček, Libor Grubhoffer

11:25 - 11:40 NOVEL TWO - DOMAIN SUPERLECTIN FROM THE HUMAN OPPORTUNISTIC PATHOGEN *BUKHOLDERIA CENOCEPACIA*

Ondřej Šulák, Monia Delia, Gianluca Cioci, Annabelle Varrot, Anne Imberty, Michaela Wimmerová

11:40 - 11:55 THE BINDING MODES OF SACCHARIDES IN THE ACTIVE SITE OF β -GALACTOSIDASE

Andrea Štěpánková, Tereza Skálová, Jan Dohnálek, Jarmila Dušková, Petr Kolenko, Jindřich Hašek, Vojtěch Spiwok, Petra Lipovová

11:55 - 13:55 **LUNCH + POSTER SECTION**

INVITED LECTURES

Chairperson: Jaroslav Koča

13:55 - 14:30 BACK TO THE BIO-FUTURE

Serge Pérez

14:30 - 15:00 CARBOHYDRATES ARE SWEET COMPOUNDS; IS
CARBOHYDRATE SYNTHETIC CHEMISTRY SWEET AS WELL?

Jitka Moravcová

15:00 - 15:25 **COFFEE BREAK**

LECTURES, ORAL COMMUNICATIONS

Chairperson: Serge Pérez

15:25 - 15:45 PROCESSING OF NATURAL PRODUCTS WITH GLYCOSIDASES

Vladimír Křen, Lenka Weignerová, Petr Marhol

15:45 - 16:00 ARABINOFURANOSIDASE AS AN EFFICIENT CATALYST FOR THE
PREPARATION OF FURANOSE-CONTAINING OLIGOSACCHARIDES

Chlubnová Ilona, Spiwok Vojtěch, Dvořáková Hana, Daniellou Richard,
Nugier-Chauvin Caroline, Králová Blanka, Ferrières Vincent

16:00 - 16:20 IDENTIFICATION OF N-GLYCOSYLATION IN PROLYL
ENDOPROTEASE FROM *ASPERGILLUS NIGER* AND EVALUATION
OF THE ENZYME FOR ITS APPLICATION IN PROTEOMICS

Marek Šebela, Pavel Řehulka, Jaromír Kábrt, Helena Řehulková,
Tomáš Oždian, Martin Raus, Vojtěch Franc, Josef Chmelík

16:20 - 16:35 O- AND N-GLYCOSYLATION SITE ANALYSIS
OF PROPEPTIDES ISOLATED FROM TWO FUNGAL
BETA-N-ACETYLHEXOSAMINIDASES BY DIFFERENT
MASS SPECTROMETRIC APPROACHES

Petr Pompach, Petr Man, Hynek Mrazek, Karel Bezouska,
Vladimir Havlicek, Petr Novak

16:35 - 16:55 ANALYZING AND MODELLING THERMODYNAMICS
- THE KEY TO LECTIN ENGINEERING

Jan Adam, Zdeněk Kříž, Martin Prokop, Michaela Wimmerová,
Jaroslav Koča

16:55 - 17:10 SURFACE PLASMON RESONANCE AND CARBOHYDRATE-LECTIN
INTERACTIONS

Lenka Malinovská, Lenka Brůnová, Eva Dejmková, Michaela Wimmerová

17:10 - 17:20 **CLOSING**

POSTERS:

- P1** FREE ENERGY CALCULATIONS ON *PSEUDOMONAS AERUGINOSA* LECTIN PA-III COMPLEXED WITH VARIOUS CARBOHYDRATES
Jan Alán, Jaroslav Koča
- P2** CONSTRUCTION OF MUTANT LECTINS FROM *CHROMOBACTERIUM VIOLACEUM* AND STUDY OF CHANGES IN THEIR BINDING PROPERTIES
Lenka Brůnová, **Eva Dejmková**, Michaela Wimmerová
- P3** MOLECULAR MODELLING STUDIES OF *RALSTONIA SOLANACEARUM* LECTIN RS- 20L
Michal Ďurech, Jan Adam, Zdeněk Kříž, Nikola Kostlánová, Jaroslav Koča, Michaela Wimmerová
- P4** HEMICELLULOSE – PECTIN CROSS-LINKING IN PARSLEY ROOT CELL WALLS
Dana Flodrová, Eva Stratilová, Vlasta Sasinková, Jiřina Omelková
- P5** 4-DEOXY-4-FLUORO-D-GALACTOSYL PHOSPHONATES
Irehjargal Jambal, Jitka Moravcová, Karel Kefurt
- P6** SACCHARIDE PORPHYRIN SENSOR FOR TUMOR RECOGNITION AND TREATMENT
Zdeněk Kejik, Jarmila Králová, Juha Koivukorpi, Pavla Poučková, Elina Sievänen, Erkki Kolehmainen, Vladimír Král
- P7** STUDY THE N-ACETYLGLUCOSAMINYLTRANSFERASE V STRUCTURE THROUGH HOMOLOGY MODELING METHODS
Stanislav Kozmon, Igor Tvaroška
- P8** CHARACTERIZATION OF WORT OLIGOSACCHARIDES ON POROUS GRAPHITIC CARBON COLUMNS
Jana Krivánková, Richard Čmelík, Janette Bobál'ová
- P9** COMPUTER-ASSISTED PROTEIN ENGINEERING OF BACTERIAL LECTIN PA-III
Zdeněk Kříž, Jan Adam, Martin Prokop, Michaela Wimmerová, Jaroslav Koča
- P10** AN APPROACH TO PREPARATION OF ISOMERS OF 2,3-DIDEOXY-3-C-[(DMANNOPYRANOSYL)METHYL]-D-*arabino*-HEXOPYRANOSE
Zuzana Lövyova, Kamil Parkan and Ladislav Kniežo
- P11** PREPARATIVE SEPARATION OF SILYBIN DIASTEREOMERS USING GLYCOSIDASES
Petr Marhol, Kateřina Purchartová, Radek Gažák, David Biedermann and Vladimír Křen

- P12** RANDOM MUTAGENESIS OF PA-IIL LECTIN FROM *PSEUDOMONAS AERUGINOSA*
Jana Mrázková, Martina Pokorná and Michaela Wimmerová
- P13** COMPARATIVE STUDY OF ISOMALTOOLIGOSACCHARIDES FROM BEER RELATED MATERIALS BY MASS SPECTROMETRY
Karel Mazanec, Richard Čmelík, Zoltán Kele, Tamás Janáky and Janette Bobál'ová
- P14** PERFORMANCE OF EMPIRICAL FORCE FIELDS IN MODELLING OF PYRANOSE RING PUCKERING
Vojtěch Spiwok, Igor Tvaroška, Blanka Králová
- P15** THE PRESENCE OF SIALIC ACID IN THE SALIVARY GLANDS OF THE TICK *IXODES RICINUS*
Marie Vancová, Lenka Bučinská, Ján Štěrba, Jana Nebesářová, Libor Grubhoffer
- P16** ANALYSIS OF SACCHARIDE COMPOSITION OF *VIBRIO CHOLERAE* O135 SURFACE ANTIGENS AND STUDY OF POSSIBLE IMMUNOMODULATIVE PROTECTION
Vráblová Jana, Neščáková Zuzana, Bystrický Slavomír
- P17** FUNGAL α -L-RHAMNOSIDASE: PURIFICATION, CHARACTERIZATION AND ITS APPLICATION
Lenka Weignerová, Petr Marhol, Daniela Gerstorferová and Vladimír Křen
- P18** SUBSTRATE ENGINEERING IN β -N-ACETYLHEXOSAMINIDASES
Vladimír Křen, R. Gažák, P. Bojarová, K. Slámová, K. Křenek, S.J. Williams