



PROGRAMME

Thursday, March 21

- 13:00 15:00 Registration at Zámek Nové Hradky
14:30 Coffee
15:00 15:15 Opening of XVI Discussions and 3rd Users meeting of CIISB (*Vladimír Sklenář*)
- 15:15 16:45 **Session I**
chairperson: *Vladimír Sklenář*
- L1 3
Zdeněk Futera (University College, London)
Electric Conductivity of Multi-Heme Proteins (30 min)
- L2 4
Miroslav Kloz (ELI Beamlines)
Femtosecond vibration spectroscopy of unprotonated retinal in a UV absorbing rhodopsin biological photoreceptor
- L3 6
Irena Kratochvílová (Institute of Physics, CAS)
Critical defects in cryopreserved cell nuclei: DNA structure changes
- L4 6
Petr Kulhánek (Masaryk University)
Flexibility of DNA mismatches and its implication for mismatch recognition
- 16:45 17:15 Coffee break
- 17:15 18:15 **Invited speaker**
- L5 7
Marjolein Thunnissen (Lund University)
Structural Biology at the diffraction limited synchrotron source MAX IV
- 18:15 Dinner

Friday, March 22

- 7:30 9:00 Breakfast
- 9:00 10:35 **Session II**
chairperson: *Rostislav Škrabaňa*
- L6 7
Josef Houser (Masaryk University)
Comparative structural analysis of lectin family from *Photorhabdus spp.* (CIISB User meeting)

- L7 8
Martin Marek (Masaryk University)
Structural basis of histone deacetylase 8 (HDAC8) selective inhibition
- L8 9
Zora Nováková (Institute of Biotechnology, CAS)
New antibody-based tools for prostate cancer imaging and therapy
- L9 9
Jakub Ptáček (Institute of Biotechnology, CAS)
Design and biological and structural characterization of novel HDAC6-specific inhibitors
- L10 10
Christin Reuter (Jena Bioscience GmbH)
Crystal growth to data collection made easy (15 min)
- 10:35 11:00 Coffee break
- 11:00 12:45 **Session III** chairperson: *Jiří Pavlíček*
- L11 11
Tomasz Kabzinski (Masaryk University)
Connecting 5' to 3' activities: Interaction between Rtt103p and Trf4p (30 min, student talk)
- L12 11
Vojtěch Zapletal (Masaryk University)
Quantitative conformational analyses of intrinsically disordered proteins: nuclear magnetic resonance spectroscopy and small-angle X-ray scattering in action (student talk)
- L13 12
Evžen Bouřa (Institute of Organic Chemistry and Biochemistry, CAS)
Structural analysis of positive sense +RNA polymerases
- L14 12
Jakub Svoboda (Institute of Biotechnology, CAS)
Crystal structure and biophysical characterization of selected REP sequences (CIISB User meeting, student talk)
- L15 13
Pawel Kania (NanoTemper Technologies)
When affinity matters (15 min)
- 13:00 14:30 Lunch
- 15:30 16:00 Coffee

16:00 17:35 **Session IV**

chairperson: Ivana Kutá Smatanová

L16 14
Imrich Barák (Institute of Molecular Biology, SAS)
 Asymmetric cell division during sporulation in *Bacillus subtilis* (30 min)

L17 15
Michal Buša (Institute of Organic Chemistry and Biochemistry, CAS)
 Evolutionary upgrade of stefins for secretion in parasites (student talk)

L18 15
Edward Curtis (Institute of Organic Chemistry and Biochemistry, CAS)
 A GTP-dependent switch that controls G-quadruplex multimer formation

L19 16
Angelika Scheiflinger-Latal (Anton Paar GmbH)
 Insights into the structure and conformation of biomolecules to understand their biological function for new drug systems using SAXS in the laboratory (15 min)

Radomír Kužel (Charles University): IUCr2020 (10 min)

17:35 18:00

General Assembly of the Czech Society for Structural Biology. Meeting will be held in the Czech and/or Slovak languages.

18:00 19:30 *Dinner*19:30 22:00 **Poster Session****Saturday, March 24**

7:30 9:00 Breakfast

9:00 10:30 **Session V**

chairperson: Vojtěch Spiwok

L20 16
Pavol Bárty (Masaryk University)
 Structure and DNA delivery mechanism of gene transfer agent of *Rhodobacter capsulatus* (30 min, CIISB User meeting, student talk)

L21 17
David Buchta (Masaryk University, CEITEC)
 Genome release of Echovirus 18 (student talk)

L22 18
Dominik Hrebík (Masaryk University, CEITEC)
 Cryo-EM Structure of Bacteriophage P68: From Head to Tail (CIISB User meeting, student talk)

L23 18
Tibor Füzik (Masaryk University, CEITEC)
 Structural study of human enterovirus 70 using cryo-electron microscopy (CIISB User meeting)

10:30 11:00 *Coffee break*11:00 12:20 **Session VI**chairperson: *Imrich Barák*

L24 19
Jiří Pavlíček (Institute of Biotechnology, CAS)
 Centre of Molecular Structure in BIOCEV – Information and Updates (CIISB User meeting)

L25 19
Michaela Procházková (Masaryk University, CEITEC)
 Structure of *Leishmania* RNA virus 1 (CIISB User meeting)

L26 20
Andrea Schenk Mayerová (International Clinical Research Center FN USA)
 Laboratory evolution reveals structural elements driving enzyme evolvability

L27 20
Radim Nencka (Institute of Organic Chemistry and Biochemistry, CAS)
 With or without you: Structure vs. ligand-based drug design

12:20-12:30 Evaluation of student presentations, prizes, concluding remarks

12:30 *Lunch*



POSTERS

P1	21	P12	27
<i>Celeste Abreu (Charles University)</i>		<i>Petra Havlíčková (University of South Bohemia)</i>	
Study of N-glycan moiety dependency in the interaction of human early activation marker CD69 with its proposed ligand galectin-1		Novel Structurally Characterized HAD Phosphatase from <i>Thermococcus thio-reducens</i> with Diverse Substrate Specificity	
P2	22	P13	27
<i>Jiří Bejček (University of Chemistry and Technology)</i>		<i>Štěpán Herynek (Charles University)</i>	
Biological activity of fluorescent digitoxin derivatives		Biophysical characterization of NKp44:PCNA interaction	
P3	22	P14	28
<i>Jakub Benýšek</i>		<i>Alena Hofrová (Masaryk University, CEITEC)</i>	
<i>(Institute of Organic Chemistry and Biochemistry, CAS)</i>		Structural study of KIX domain by NMR	
Structure of cathepsin K in complex with highly potent azanitrile inhibitors		P15	28
P4	23	<i>Vladimíra Horová</i>	
<i>Tomáš Brom (Masaryk University, CEITEC)</i>		<i>(Institute of Organic Chemistry and Biochemistry, CAS)</i>	
Monomer – dimer equilibria of 14-3-3 proteins		Structural and functional analysis of the ACBD3-3A complexes in enterovirus infection	
P5	23	P16	29
<i>Barbora Břenková (Masaryk University, CEITEC)</i>		<i>Jana Houserová (Charles University)</i>	
Structure of a staphylococcal phage connector protein		Recombinant expression of protein NKp46 and its ligand Epa1 and study of their interaction	
P6	24	P17	30
<i>Ondrej Cehlár (Institute of Neuroimmunology, SAS)</i>		<i>Andrea Hušková</i>	
Conformations of peptides from microtubule repeat regions of intrinsically disordered protein tau		<i>(Institute of Organic Chemistry and Biochemistry, CAS)</i>	
P7	24	The Fanconi anaemia repair pathway: „Stay with me, ubiquitin. “	
<i>Tatsiana Charnavets (Institute of Biotechnology, CAS)</i>		P18	30
Biophysical characterization of proteins at Centre of molecular structure of BIOCEV		<i>Petr Jeřábek (Charles University)</i>	
P8	25	Cytochrome P450 1A2 features similar structural pattern of the trans-membrane segment in membranes with a different thickness	
<i>Denis Cmunt (Charles University)</i>		P19	31
NK cell activating ligands in fusion with nanobodies: The role of arrangement on their binding capacity		<i>Miroslav Jurásek (Masaryk University)</i>	
P9	25	Effect of phosphorylation on PDZ domain in Dishevelled	
<i>Anna Dubánková</i>		P20	32
<i>(Institute of Organic Chemistry and Biochemistry, CAS)</i>		<i>Thangavel Karthick</i>	
Crystal structure of kobuviral RNA polymerase reveals that the N-termini has a unique fold among picornaviruses		<i>(Institute of Organic Chemistry and Biochemistry, CAS)</i>	
P10	26	Vibrationally-resolved UV-absorption and magnetic circular dichroism of nucleosides	
<i>Eva Fujdiarová (Masaryk University)</i>		P21	33
Influence of glucose O3 methylation on binding properties towards PLL2 lectin		<i>Barbora Kašćáková (University of South Bohemia)</i>	
P11	26	Molecular-biology and Structural Study of Avian Orthoreovirus Protein NS	
<i>Mária Gondová (Masaryk University, CEITEC)</i>		P22	34
Role of honeybee hexamerin in regulation of pupae development		<i>Tomáš Klumpler (Masaryk University, CEITEC)</i>	
		Hsp70 ATP-dependent Dimerization and Interactions	



P23	35	P33	42
<i>Eva Konkol'ová</i> (Institute of Organic Chemistry and Biochemistry, CAS) Nanobodies as versatile purification and detection system		<i>Tereza Skálová</i> (Institute of Biotechnology, CAS) Interaction of natural killer cell receptor NKR-P1 with its ligand LLT1	
P24	35	P34	43
<i>Petra Krafčíková</i> (Institute of Organic Chemistry and Biochemistry, CAS) Flavivirus methyltransferase as a target in antiviral treatment		<i>Miroslav Smola</i> (Institute of Organic Chemistry and Biochemistry, CAS) Structure of STING with fluorinated agonists	
P25	36	P35	43
<i>Kateřina Krejčová</i> (Institute of Organic Chemistry and Biochemistry, CAS) The role of FANCI phosphorylation in Fanconi anemia pathway regulation		<i>Zuzana Sochorová Vokáčová</i> (J. Heyrovský Institute of Physical Chemistry, CAS) Theoretical study of <i>Candida antarctica</i> lipase B in organic solvents	
P26	37	P36	43
<i>Barbora Landová</i> (Institute of Organic Chemistry and Biochemistry, CAS) The study of formation, stability and repair of spontaneously formed Abasic Site Interstrand Cross-link		<i>Jaroslav Šrp</i> (Institute of Organic Chemistry and Biochemistry, CAS) Non-canonical reactive site against serine proteases invented by plant Kunitz inhibitors	
P27	38	P37	44
<i>Yingliang Liu</i> (Institute of Biotechnology, CAS) Time-resolved infrared structural biology at IBT and ELI Beamlines		<i>Jan Stránský</i> (Institute of Biotechnology, CAS) Centre of Molecular Structure in BIOCEV – Current status	
P28	38	P38	44
<i>Markéta Makovická</i> (Masaryk University, CEITEC) Investigation of dimer-monomer equilibrium of the regulatory domain of tyrosine hydroxylase		<i>Marta Šiborová</i> (CEITEC) Structure of bacteriophage SU10 from the family Podoviridae	
P29	39	P39	44
<i>Klaudia Mihalovičová</i> (Institute of Neuroimmunology) Crystallization of the antibody DC25 Fab and its complex with recombinant truncated tau protein from Alzheimer's PHF		<i>Jan Šilhan</i> (Institute of Organic Chemistry and Biochemistry, CAS) Substrate specificity of NEIL3 glycosylase in DNA interstrand cross-link repair	
P30	40	P40	45
<i>Erik Nomilner</i> (Masaryk University, CEITEC) Interaction of MAP2c with SH3 domain of plectin		<i>Rostislav Škrabaňa</i> (Institute of Neuroimmunology, SAS) Crystallography of fuzziness in the complexes of intrinsically disordered proteins	
P31	40	P41	46
<i>Markéta Nováková</i> (Institute of Organic Chemistry and Biochemistry, CAS) Crystal structure of <i>Bacillus subtilis</i> transcription repressor DeoR in complex with its operator DNA		<i>Dalibor Trapl</i> (University of Chemistry and Technology) Approximating collective variables using artificial neural networks	
P32	41	P42	46
<i>Ivan Polsinelli</i> (Free University of Bolzano) The levansucrase puzzle: how to combine structure and biochemistry to understand the biological function		<i>Lucie Valentová</i> (Masaryk University, CEITEC) Structure of <i>Tribolium castaneum</i> hexamerin solved by cryo-electron microscopy	



