

XXII Discussions in Structural Molecular Biology and 9th User Meeting of CIISB

19-21 March 2026

Programme

Thursday, March 19

12:00 - 14:30 Registration and accommodation, **coffee**

All talks are 20 minutes long unless indicated otherwise. All times are INCLUDING discussion.

14:30 **Opening of XXII Discussions and 9th User Meeting of CIISB** (*Jan Dohnálek*)

Lecture no. – page of abstract

14:40 - 15:10 PhD Thesis Award 2025 winner's talk *Chair person: Jan Dohnálek*

Jana Campbell Institute of Biotechnology, Czech Academy of Sciences, Vestec	Structure-function studies of tubulin-modifying enzymes (PhD Thesis Award 2025 winner's talk, 30 min)	L1 –
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15:10 - 15:50 **Session I** *Chair person: Pavel Plevka*

Pauline Audergon Instruct-ERIC Hub, Oxford, UK	An Introduction to Instruct-ERIC: Funded Access to Structural Biology Infrastructure	L2 –
Miroslava Alblová Institute of Biotechnology, Czech Academy of Sciences, Vestec	Centre of Molecular Structure – Protein Production and Technologies for Structural and Biophysical Analysis	L3 –

15:50 - 16:20 **Coffee**

16:20 - 18:00 **Session II** *Chair person: Pavlína Řezáčová*

Jan Bláha Faculty of Science, Charles University, Prague	Efficient enrichment of <i>in cellulo</i> grown protein crystals	L4 –
Jakub Bělíček Faculty of Science, Palacký University, Olomouc	Insight into GABA shunt-associated aldehyde dehydrogenases (ALDH) and stress responses of ALDH superfamily in moss and barley	L5 –
Jan Dohnálek Institute of Biotechnology, Czech Academy of Sciences, Vestec	Molecular Biophysics Database for annotated raw data	L6 –
Bohdan Schneider Institute of Biotechnology, Czech Academy of Sciences, Vestec	Base pairing? Base pairing!	L7 –
Paul Driver Molecular Dimensions, Cambridge	Better Samples, Better Structures: New Practical Tools for Cryo-EM and Crystallography (10 min)	L8 –
Jakub Nowak NanoTemper Technologies, Kraków	From Expression to Interaction: Biophysical Characterization of RNA–Protein Complexes Across the Structural Biology Workflow (10 min)	L9 –

18:00 **Dinner**

19:00 **CIISB Executive committee**

20:00 **Pub Quiz**

Friday, March 20

7:30 - 9:00 *Breakfast*

9:00 - 10:30 **Session III** *Chair person: Jana Škerlová*

Lenka Faltová Institute for Chemical and Bioengineering, ETH Zurich	Modulation of enzymatic activity and amyloid formation by biomolecular condensates <i>L10 –</i>
Aditi Chatterjee Institute of Biotechnology, Czech Academy of Sciences, Vestec	Engineering protein structural dynamics with a novel genetically encoded Raman-active and chemically-reactive non-canonical amino acid (Student talk) <i>L11 –</i>
Andrej Tekel Faculty of Science, Charles University, Prague	Structural Mechanisms of Nedd4-2 Autoinhibition and Regulation by Membranes, Calcium and 14-3-3η (Student talk) <i>L12 –</i>
Klára Kohoutová Faculty of Science, Charles University, Prague	The activity of CDK16 is regulated by 14-3-3 <i>L13 –</i>
Kateřina Kolková SPECION, s.r.o., Prague	From Molecule to Mechanism: Integrated Instrumentation for Structural Biology (10 min) <i>L14 –</i>

10:30 - 11:00 **Conference photo and Coffee break**

11:00 - 12:30 **Session IV** *Chair person: Vojtěch Spiwok*

Edward Curtis Institute of Organic Chemistry and Biochemistry, Czech Academy of Sciences, Prague	Exploring the sequence space of a fluorescent deoxyribozyme using structured libraries, selection and machine learning <i>L15 –</i>
Zdeněk Futera Faculty of Science, University of South Bohemia, České Budějovice	Computational Approaches for Biomolecular Electronics From Molecular Bridges to Protein Junctions <i>L16 –</i>
Jiří Černý Institute of Biotechnology, Czech Academy of Sciences, Vestec	Annotation, validation, refinement, and modeling of nucleic acid structures <i>L17 –</i>
Matteo Cattaneo Syncell Inc., Livermore, CA, USA	Microscopic Scooping for Unbiased, Subcellular, Spatial Optoproteomic Discovery (10 min) <i>L18 –</i>
Poster flash talks, 2 minutes each	
Jitka Vysloužilová (Faculty of Science, University of South Bohemia, České Budějovice) Simulation of Electron Transfer on Biomolecular Bridges by Non-Adiabatic Molecular Dynamics (Student poster)	
Zuzana Králová (Institute of Organic Chemistry and Biochemistry, Czech Academy of Sciences, Prague) Probing the specificity of fluorescent deoxyribozymes using single-step selections and machine learning (Student poster)	
Patrik Lettrich (Institute of Organic Chemistry and Biochemistry, Czech Academy of Sciences, Prague) Development and application of catalytic DNA molecules (Student poster)	
Adam Brzezina (Faculty of Science, Charles University, Prague) Biophysical Characterization of Proteins and Protein Complexes by Sedimentation Velocity Analytical Ultracentrifugation (Student poster)	
Martin Slavík (Institute of Physiology, Czech Academy of Sciences, Prague) Regulation of Nedd4-2 by Ndfip adaptor proteins (Student poster)	
Eva Paulenová (CEITEC, Masaryk University, Brno) PHL2: a black sheep of the PLL lectin family	

12:30 **Lunch**

15:30 **Coffee**

16:00 - 17:40 **Session V** Chair person: **Lukáš Židek**

Ladislav Bumba Institute of Microbiology, Czech Academy of Sciences, Prague	C-terminal domain of the filamentous hemagglutinin FhaB is crucial for interaction of <i>Bordetella pertussis</i> with ciliated epithelial cells L19 –
Zdeněk Tošner Faculty of Science, Charles University, Prague	High-resolution solid-state NMR of proteins: Current status and perspectives L20 –
Ondřej Vaněk Faculty of Science, Charles University, Prague	Host, sweet host! A tale of glycans, lectins, microbes, killers L21 –
Kateřina Sedláčková Altium International s.r.o., Prague	SPRead the word about the REVolution! (10 min) L22 –
Josef Uskoba BioTech a.s., Prague	Photonic Integrated Circuits - Future of Immobilization Techniques (10 min) L23 –
Poster flash talks, 2 minutes each	
Róbert Šándor (CEITEC, Masaryk University, Brno) Phosphorylation of Microtubule-Associated Protein 2c by Serine/Threonine Kinases and the Effect of Phosphorylation on its Interactions (Student poster)	
Tereza Buráňová (CEITEC, Masaryk University, Brno) When LecB Is Not Alone: Structural and Functional Analysis of a Two-Domain Lectin (Student poster)	
Yelyzaveta Pulnova (Extreme Light Infrastructure ERIC, Dolní Břežany) Plasma X-ray source for time-resolved diffraction in ELI (Student poster)	
Jayashri Babaji Bhosale (Faculty of Science, Charles University, Prague) Structural basis of ASK1 regulation: from 14-3-3 mediated inhibition to MKK7 substrate recognition (Student poster)	
Hana Šimečková (CEITEC, Masaryk University, Brno) Structure of the LE3 phage infecting <i>Leptospira biflexa</i>	
Adéla Fejfarová (Institute of Organic Chemistry and Biochemistry, Czech Academy of Sciences, Prague) Structural complexity in bacterial transcription regulation (Student poster)	

17:45 - 18:30 **General Assembly of the Czech Society for Structural Biology**

The meeting will be held in the Czech and/or Slovak languages

1. Volba zapisovatele
2. Schválení programu
3. Výroční zpráva Rady ČSSB o činnosti a hospodaření
4. Zpráva revizní komise
5. Schválení výroční zprávy Rady ČSSB o činnosti a hospodaření
6. Revize členské základny
7. Infrastruktury se vztahem ke strukturní biologii, přístupy, financování, vývoj Instructu a jiných
8. Různé

18:30 - 19:30 **Dinner**

19:30 - 21:30 **Poster session**, (CSSB Council meeting)

Saturday, March 21

7:30 - 9:00 *Breakfast*

9:00 - 10:20 **Session VI** *Chair person: Jiří Nováček*

Gabriel Soares Guerra Masaryk University, CEITEC, Brno	Time-resolved cryo-EM investigation of the translation initiation in bacteria <i>L24 –</i>
Amiyanranjan Das Masaryk University, CEITEC, Brno	Structural and mechanistic insights into Rift Valley Fever Virus genome replication (Student talk) <i>L25 –</i>
Tibor Füzik Masaryk University, CEITEC, Brno	Structures of asymmetric particles of TBEV provide insight into flavivirus assembly and maturation <i>L26 –</i>
Dalibor Košek Institute of Physiology, Czech Academy of Sciences, Prague	The Asymmetry-to-Symmetry Transition in Copy-Out-Paste-In DNA Transposition <i>L27 –</i>

10:20 - 10:50 *Coffee break*

10:50 - 11:50 **Session VII** *Chair person: Michaela Wimmerová*

Tomáš Koval' Institute of Biotechnology, Czech Academy of Sciences, Vestec	The challenge of bacterial RNA polymerase biophysical characterization <i>L28 –</i>
Ján Sabó University of Groningen, The Netherlands	Human papillomavirus virus particles studied by High-Speed AFM <i>L29 –</i>
Miroslav Kloz Extreme Light Infrastructure ERIC, Dolní Břežany	Analog Computing in Biological Photoreceptors: The Case of a Neorhodopsin Tandem <i>L30 –</i>

11:50 - 12:10 **Evaluation of student presentations, prizes, concluding remarks**

12:10 *Lunch & departure*