

BIOCEV DAYS 2022

BIOCEV, Průmyslová 595, Vestec 252 50 · Czech Republic
Main Conference Hall · www.biocev.eu

Monday October 10

Tuesday October 11

Wednesday October 12

12:30 - 12:45

Opening Ceremony

Pavel Martásek / Scientific Director, BIOCEV

Announcement of the BIOCEV's PhD Student Publication Awards

Cellular Biology and Virology

Chair: **Jan Tachezy** / Head of Research Programme

12:45 - 13:35

Cell entry of non-enveloped viruses

Pavel Plevka / Laboratory of Structural Virology, CEITEC, Masaryk University, Brno

13:35 - 14:10

Semaphorins and Plexins - Orchestrating Signalling in Time and Space

Daniel Rozbeský / Faculty of Science, Charles University

14:10 - 14:30

Coffee Break - Foyer at the Conference Hall

14:30 - 15:05

Search for New Components of IL-17 Receptor Regulating Autoimmune Pathology

Peter Dráber / First Faculty of Medicine, Charles University

15:05 - 15:20

Tumour-Associated Macrophages - an Insight in Their Cytotoxic Potential in tumours with Reduced MHC-I Expression

Adriana Piataková / Faculty of Science, Charles University

15:20 - 15:35

Enzyme Catalysis Prior to Aromatic Residues: Reverse Engineering of a Dephospho-CoA Kinase

Mikhail Makarov / Faculty of Science, Charles University

15:35

Poster Session (with commentary and drink)

May continue during a buffet dinner / Light refreshment

17:00 - 20:00

Buffet & Barbecue Dinner - Perfect Canteen BIOCEV

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Functional Genomics

Chair: **Radislav Sedláček** / Head of Research Programme

- 09:00 - 09:50 **Development of Nonviral Vectors: Parallel Approaches Using Cell Derived Therapy**
Saara Laitinen / Finnish Red Cross Blood Service, Finland
- 09:50 - 10:25 **The Effect of CDK13 Deficiency on Embryogenesis**
Marcela Buchtová / Institute of Animal Physiology and Genetics, Czech Academy of Sciences + Masaryk University, Brno
- 10:25 - 10:45 **Coffee Break** - Foyer at the Conference Hall
- 10:45 - 11:20 **Regulation of Mammary Epithelial Morphogenesis by Fibroblasts**
Zuzana Sumbalová Koledová / Masaryk University, Brno
- 11:20 - 11:35 **Loss of Wiz Function Affects Methylation Pattern in Palate Development and Leads to Cleft Palate**
Ivana Buková / Institute of Molecular Genetics, Czech Academy of Sciences
- 11:35 - 11:50 **Posttranscriptional Regulation of Amelogenin by Non Canonical Poly A PolymeraseTent5a is Essential for Enamel Formation**
Goretti Aranaz Novaliches / Institute of Molecular Genetics, Czech Academy of Sciences
- 11:50 - 13:00 **Lunch Break - Perfect Canteen BIOCEV** · Not covered by the organizers

Structural Biology and Protein Engineering

Chair: **Bohdan Schneider** / Head of Research Programme

- 13:00 - 13:50 **Explosive Studies of Biological Macromolecules**
Janos Hajdu / Uppsala University, Sweden + ELI Beamlines, Institute of Physics, Czech Academy of Sciences
- 13:50 - 14:25 **May the Light be with You: Monitoring Photoinduced Structural Dynamics of the Transcription Factor EL222 with the Aid of Genetic Code Engineering**
Gustavo Fuertes Vives / Institute of Biotechnology, Czech Academy of Sciences
- 14:25 - 14:50 **Coffee Break** - Foyer at the Conference Hall
- 14:50 - 15:05 **Fast Fluoralkylation of Proteins Uncovers the Structure and Dynamics of Biological Macromolecules.**
Lukáš Fojtík / Institute of Microbiology, Czech Academy of Sciences
- 15:05 - 15:20 **Structural glimpse into 14-3-3 protein dependent regulation of ubiquitin ligase Nedd4-2**
Pavel Pohl / Institute of Physiology, Czech Academy of Sciences
- 15:20 - 15:35 **Structural Characterization of Protein-DNA Complexes by Hydroxyl Radicals**
Marek Polák / Institute of Microbiology, Czech Academy of Sciences
- 15:35 - 15:50 **Exploiting the Non-Canonical Amino Acid 4-Cyanophenylalanine for Time-Resolved Infrared Structural Biology of a Photosensitive DNA-Binding Protein**
Chaudhari Aditya Suresh / Institute of Biotechnology, Czech Academy of Sciences
- 15:50 **Closing Remarks**

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Biomaterials and Tissue Engineering

Chair: **Tomáš Etrych** / Head of Research Programme

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- 09:00 - 09:50 **The Role of Extracellular Matrix in Nervous System Regeneration**
Jessica Kwok / University of Leeds, United Kingdom
- 09:50 - 10:25 **Fibroblasts in Perspective of Modern Cell/Molecular Biology**
Karel Smetana / First Faculty of Medicine, Charles University
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- 10:25 - 10:45 **Coffee Break** - Foyer at the Conference Hall
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- 10:45 - 11:20 **Polymer Particles as Contrast Agents for Photoacoustic Tomography**
Monika Paúrová / Institute of Macromolecular Chemistry, Czech Academy of Sciences
- 11:20 - 11:35 **MicroRNA in Spinal Cord Injury: Potential Role and Therapeutic Significance**
Ivan Arzhanov / Institute of Experimental Medicine, Czech Academy of Sciences
- 11:35 - 11:50 **Exosomes Influence Biological Activity of Fibroblasts in Vitro**
Strnadová Karolína / First Faculty of Medicine, Charles University
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- 11:50 - 13:00 **Lunch Break - Perfect Canteen BIOCEV** · Not covered by the organizers

Development of Diagnostics and Therapeutic Procedures

Chair: **Stanislav Knoch** / Head of Research Programme

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- 13:00 - 13:50 **Are We There Yet? The Journey of Proteins to their Cellular Destination**
Moran Dvella Levitt / The Mina and Everard Goodman Faculty of Life Sciences, Bar-Ilan University, Israel
- 13:50 - 14:25 **New Paradigma in Cell Biology: From Horizontal Mitochondrial Transfer to Tissue Regeneration**
Jiří Neuzil / Institute of Biotechnology, Czech Academy of Sciences
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- 14:25 - 14:45 **Coffee Break** - Foyer at the Conference Hall
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- 14:45 - 15:20 **Regeneration Initiation Studied by Single Cell and Spatial Transcriptomics**
Radek Šindelka / Institute of Biotechnology, Czech Academy of Sciences
- 15:20 - 15:35 **The Role of Intrinsic Disorder in State-Wise Assembly of Functional Mitochondrial Complex II**
Soňa Bálintová / Institute of Biotechnology, Czech Academy of Sciences
- 15:35 - 15:50 **Use of Genomic Analyses in Identification of Molecular Basis of Rare Diseases of Pediatric Onset**
Lenka Nosková / Research Unit for Rare Disease, Department of Pediatrics and Metabolic Disorders / First Faculty of Medicine, Charles University
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- 15:50 **Official Closing**