

## SCIENTIFIC PROGRAMME

**March 19, 2024**

**9:00- 9:10      Opening Remarks**

**Andrej Kovac**, Institute of Neuroimmunology SAS, Slovakia

**9:10 – 10:50    PLENARY SESSION 1**

*(Chair: Andrej Kovac, Institute of Neuroimmunology SAS, Slovakia)*

**9:10- 9:35      Anti-Amyloid Antibody (AAb) Binding to Amyloid Precursor Protein (APP) as a Mechanism for Amyloid Related Imaging Abnormalities (ARIAs)**

*William A Banks, University of Washington, Seattle, USA*

**9:35- 10:00    Regulation of claudin-5 at the blood brain barrier in health and disease**

*Matthew Campbell, Trinity College, Dublin, Ireland*

**10:00-10:25    Translational PET imaging of P-glycoprotein activity at the blood-brain barrier in health and disease**

*Oliver Langer, Medical University of Vienna, Austria*

**10:25-10:50    A Novel Tri-Substituted Purine Derivative mitigates Hypoxia–Ischemia-Related Brain Injury in Neonatal Rats via Agrin, Zyxin and Synaptotagmin proteins**

*Aloïse Mabondzo, Paris Saclay University, Paris, France*

**10:50-11:15    Coffee Break**

**11:15 – 12:30   PLENARY SESSION 2**

*(Chair: Yoichi Morofuji, Nagasaki University, Japan)*

**11:15-11:40    Synergistic induction of blood-brain barrier properties in culture models**

*Maria Deli, Biological Research Centre, Szeged, Hungary*

**11:40-12:05    Development of a novel organ-on-a-chip model combining a human cell-based culture model of the blood-brain barrier and human midbrain organoids**

*Fruzsina Walter, Biological Research Centre, Szeged, Hungary*

**12:05-12:30    Development of blood-cerebrospinal fluid barrier model expressing pharmaceutically important transporters**

*Krutika Khiratkar, Institute of Neuroimmunology SAS, Slovakia*

**12:30-14:00    Lunch and POSTER DISCUSSION**

**14:00- 14:50    PLENARY SESSION 3**

*(Chair: William A Banks, University of Washington, Seattle, USA)*

**14:00- 14:25    Penetration of Micro- and Nanoplastics Across the Blood-Brain Barrier: Unveiling the Influence of Biomolecular Coronas**

*Lukas Kenner, Medical University of Vienna, Austria*

- 14:25- 14:50 Cellular and molecular effects of nanopolystyrene particles on the neurovascular unit**  
*Winfried Neuhaus, Center for Health and Bioresources, Competence Unit Molecular Diagnostics, AIT - Austrian Institute of Technology GmbH, Vienna, Austria*
- 14:50- 16:05 PLENARY SESSION 4**  
(Chair: *Maria A. Deli, Biological Research Centre, Szeged, Hungary*)
- 14:50-15:15 Nanoparticles decorated with targeting ligand combinations to cross the blood-brain barrier**  
*Szilvia Veszeka, Biological Research Centre, Szeged, Hungary*
- 15:15-15:40 Drug delivery nanosystem to treat neuroinfections**  
*Mangesh Bhide, University of Veterinary Medicine and Pharmacy, Slovakia*
- 15:40-16:05 Tick-borne encephalitis virus at BBB and behind**  
*Martin Palus, Veterinary Research Institute, Brno, Czechia*
- 16:05-16:30 Coffee Break**
- 16:30- 18:10 PLENARY SESSION 5**  
(Chair: *Mangesh Bhide, University of Veterinary Medicine and Pharmacy, Slovakia*)
- 16:30- 16:55 Deciphering the mechanisms involved in the development of breast cancer brain metastases by combining in vitro and ex vivo approaches**  
*Caroline Mysiorek, University of Artois, Lens, France*
- 16:55-17:20 Deconvolution identifies cell type specific transcription patterns after loss of DNA methylation in the mouse brain**  
*Sabine Lager, University of Veterinary Medicine, Vienna, Austria*
- 17:20-17:45 Accumulation of  $\alpha$ -synuclein in the brain of mice with DSS-induced colitis**  
*Fuyuko Takata, Fukuoka University, Japan*
- 17:45-18:10 Unraveling tau pathology's impact on lipid metabolism: evidence from transgenic rats**  
*Dominika Olesova, Institute of Neuroimmunology SAS, Slovakia*
- 18:10-18:20 Concluding remarks**
- 19:00-20:00 Dinner**
- 20:00-22:00 Wine tasting**