



Integrating Neuropharmacology and Bioinformatics with AI

Venue: Auditorium Maximum, 33 Krupnicza Street, Krakow, Poland

July 22, 2025

10.00 - 10.30 a.m.	Registration	
10.30 - 12.00 a.m.	<p>Session 1: Exploring disease and treatment associations in genome data banks Chair: PhD, Michał Korostyński, PhD 90 min, Medium Hall A S. 01-1 Taras Oleksyk Department of Biological Sciences, Oakland University, Rochester, USA <i>Uncovering Hidden Genomic Diversity in Europe</i> S. 01-2 Ilse Kratschmer Institute of Science and Technology, Klosterneuburg Austria TBA S. 01-3 TBA TBA TBA</p>	<p>Session 2: Mechanisms and modeling of non-communicable diseases Chair: Prof. Józef Dulak, PhD 90 min, Medium Hall B S. 02-1 Judith Sluimer Maastricht University Medical Center, Maastricht, The Netherlands <i>Vascular fibroblast (dys)function as new causal mechanism in vascular ageing and hypertension.</i> S. 02-2 Gabriela Kania University Zurich, Switzerland <i>Tale of two tubes exploring mechanisms of failing human heart - focus on cardiac microtissues</i> S. 02-3 Przemysław Błyszczuk Collegium Medicum, Jagiellonian University, Kraków <i>Right heart in single cell RNAseq analysis</i> S. 02-4 Agnieszka Jaźwa-Kusior Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Kraków, Poland <i>Endothelial cell senescence at the crossroads of inflammation and vascular dysfunction</i></p>
12.00 - 1.30 p.m.	<p>Session 3: Materials for medical applications Chair: Prof. Aneta Frączek-Szczypta, PhD 90 min, Medium Hall A S.03-1 TBA TBA TBA S.03-2 TBA TBA TBA S.03-3 TBA TBA TBA S.03-4 TBA TBA TBA</p>	<p>Session 4: Neuroinformatics, computational neuroscience, deep learning: perspectives on computing and the brain Chair: Prof. Krzysztof Tokarski, PhD, Prof. Daniel Wójcik, PhD 90 min, Medium Hall B S.04-1 Daniel Wójcik Nencki Institute of Experimental Biology PAS, Warszawa, Poland <i>Neuroinformatics, computational neuroscience, deep learning - what's in it for me?</i> S.04-2 Piotr Majka Nencki Institute of Experimental Biology PAS, Warszawa, Poland <i>AI in digital neuroanatomy</i> S.04-3 Prof. Włodzisław Duch, PhD Nicolaus Copernicus University, Toruń, Poland <i>Perspectives from AI on intelligence</i> S.04-4 Chaitanya Chintaluri, PhD Institute of Science and Technology Austria, Vienna, Austria <i>Metabolically regulated spiking could serve neuronal energy homeostasis and protect from reactive oxygen species</i></p>
1.30 - 2.15 p.m.	Coffee break '+' - Exhibition Room	
2.15 - 2.45 a.m.	Sponsor presentation	

2.45 - 3.45 p.m.	Session 5: Presentation of ERC grants S. 05-1 Janka Matrai European Research Council Executive Agency, Brussels, Belgium S. 05-2 TBA TBA TBA S. 05-3 TBA TBA S. 05-4 TBA TBA TBA	
3.45 - 4.00 p.m.	Welcome ceremony Film about Kraków and the Maj Institute of Pharmacology Polish Academy of Sciences - Large hall Chairs: Honorary Committee & Organizing Committee	
4.00 - 5.00 p.m.	Inaugural lecture Prof. Jan Bjaalie, MD, PhD Institute of Basic Medical Sciences, University of Oslo, Norway, EBRAINS AISBL, Brussels, Belgium <i>Harnessing Big Data in Neuroscience: Strategic Insights into Data Sharing and Machine Learning Applications</i> Large Hall Chairs: Professor Małgorzata Filip, PhD, Professor Joanna Pera, PhD	
5.00 - 9.00 p.m.	Welcome party	
July 23, 2025		
9.00 - 10.30 a.m.	Session 6: New models and tools for stem cell research Chair: TBA 90 min, Medium Hall A S.06-1 Małgorzata Borowiak Adam Mickiewicz University, Poznań, Poland <i>Beta cells and atypical diabetes</i> S.06-2 Agnieszka Ryba-Wolff, PhD Max Delbrück Center, Berlin, Germany <i>Brain organoids to model human brain diseases</i> S.06-3 Jonathan Arias EMBL, Vilnius University, Vilnius, Lithuania <i>Characterization of the HLA class I landscape in the Lithuanian population for regenerative medicine applications</i> S.06-4 Tomasz Kamiński Warsaw University, Warszawa, Poland <i>Novel droplet microfluidic methods for single-cell assays</i>	Session 7: Research methods and modelling in medical applications Chair: Prof. Robert Filipek, PhD 90 min, Medium Hall B S.07-1 TBA TBA TBA S.07-2 TBA TBA TBA S.07-3 TBA TBA TBA S.07-4 TBA TBA TBA
10.30 - 11.00 a.m.	Coffee break - Exhibition Room	
11.00 - 11.30 a.m.	Sponsor presentation	

11.30 a.m. - 12.30 p.m.	Plenary lecture 1 Prof. Józef Dulak, PhD Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Kraków, Poland <i>Beyond dystrophin: novel targets for treatment of Duchenne muscular dystrophy</i> Medium Hall Chairs: Professor Joanna Pera, PhD	
12.30 - 2.00 p.m.	Poster session 1 Lunch break - Exhibition Room	
2.00 - 3.30 p.m.	Session 8: Targeting Serotonin 5-HT6 Receptor for Neuropsychiatric and Neurological Treatment Strategies Chair: Prof. Paweł Zajdel, PhD; Severine Chaumont-Dubel, PhD 90 min, Medium Hall A S. 08-1 Philippe Marin Université de Montpellier, Centre National de la Recherche Scientifique, Institut National de la Santé et de la Recherche Médicale <i>Targeting the 5-HT6 receptor-mTOR axis in schizophrenia: from treatment of symptoms to a disease modifying strategy</i> S. 08-2 Severine Chaumont-Dubel Université de Montpellier, Centre National de la Recherche Scientifique, Institut National de la Santé et de la Recherche Médicale <i>New Insights in ciliary serotonin 5-HT6 receptor signaling</i> S. 08-3 Natalia Malikowska-Racia Maj Institute of Pharmacology Polish Academy of Sciences, Krakow, Poland <i>Dual antagonism of 5-HT3 and 5-HT6 receptors as a new strategy for targeting schizophrenia</i> S. 08-4 Maciej Sałaga Faculty of Medicine, Medical University of Lodz, Poland <i>Potential therapeutic use of serotonin type 6 receptor ligands in irritable bowel syndrome (IBS): preclinical evidence</i>	Session 9: TBA IP PAS Chair: TBA 90 min, Medium Hall B S.09-1 TBA TBA TBA S. 09-2 TBA TBA TBA S. 09-3 TBA TBA TBA S. 09-4 TBA TBA TBA
3.30 - 4.00 p.m.	Coffee break - Exhibition Room	
4.00 - 5.30 p.m.	Session 10: TBA IP PAS Chair: 90 min, Medium Hall A S. 10-1 TBA TBA TBA S. 10-2 TBA TBA TBA S. 10-3 TBA TBA TBA S. 10-4 TBA TBA TBA	Session 11: TBA IP PAS Chair: TBA 90 min, Medium Hall B S. 11-1 TBA TBA TBA S. 11-2 TBA TBA TBA S. 11-3 TBA TBA TBA S. 11-4 TBA TBA TBA

9.00 - 10.30 a.m.	<p>Session 12: Novel diagnostics methods in medicine Chair: Prof. Artur Rydosz, PhD 90 min, Medium Hall A S. 12-1 Maciej Wielgosz AGH University Poland, Kraków <i>CyfroVet - AI in veterinary medicine</i> S. 12-2 Sandra Zarychta AGH University Poland, Kraków <i>Pancreatic Segmentation Techniques: Bridging Medical Imaging for Accurate 3D Visualization in Preoperative Planning</i> S. 12-3 Dominik Grochala AGH University Poland, Kraków <i>Exhaled breath analysis as a novel diagnostic tool for daily clinical practice</i></p>	<p>Session 13: Neuroimaging Innovations: Integrating Bioinformatics for Improved Analysis Chair: Bartosz Pomierny, PhD 90 min, Medium Hall B S. 13-1 Michel Soares Mesquita Medscopix, King's College London, UK <i>Optimizing Neuroimaging Pipelines for Enhanced Translational Insights</i> S. 13-2 Maria Elisa Serrano (Melisa) King's College London, UK <i>Current analysis methods in preclinical PET: an overview</i> S. 13-3 Eugene Kim King's College London, UK <i>Imaging transcriptomics of genetically altered mouse models of brain disorders</i> S. 13-4 David Barry Francis Crick Institute, London, UK <i>Reproducibility in Biomedical Research through Image Analysis</i></p>
10.30 - 11.00 a.m.	Coffee break - Exhibition Room	
11.00 - 11.30 a.m.	Sponsor presentation	
11.30 a.m. - 12.30 p.m.	<p>Plenary lecture 2 Prof. Steve Williams, PhD Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, UK and Centre for Neuroimaging Sciences based at the South London and Maudsley Hospital, London, UK <i>Bridging the Gap: Transitioning Brain Imaging Techniques from Lab to Clinic</i> Chair: Professor Małgorzata Filip, PhD</p>	
12.30 - 2.00 p.m.	<p>Poster session 2 Coffee break '+' - Exhibition Room</p>	
2.00 - 3.00 p.m.	<p>Session 14: Young investigator session Medium Hall A+B Chair: Katarzyna Głombik, PhD</p>	
3.00 - 3.30 p.m.	<p>Closing & Award ceremony - Medium Hall Chairs: Professor Małgorzata Filip, PhD, Professor Joanna Pera, PhD</p>	