



Integrating Neuropharmacology and Bioinformatics with AI

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

	July 22, 2025				
9.00 - 10.00 a.m.	Registration				
10.00 - 11.30 a.m.	Session 1: Exploring disease and treatment associations in genome data banks	Session 2: Mechanisms and modeling of non-communicable diseases			
	Chair: PhD, Michał Korostyński, PhD	Chair: Prof. Józef Dulak, PhD			
	90 min, Medium Hall A	90 min, Medium Hall B			
	S. 01-1	S. 02-1			
	Taras Oleksyk	Judith Sluimer			
	Department of Biological Sciences, Oakland University, Rochester, USA	Maastricht University Medical Center, Maastricht, The Netherlands			
	A study of 20 000 Type 1 Diabetes exomes in Eastern Europe	Vascular fibroblast (dys)function as new causal mechanism in vascular ageing and hypertension.			
	S. 01-2	S. 02-2			
	llse Kratschmer	Gabriela Kania			
	Institute od Science and Technology, Klosterneuburg, Austria	University Zurich, Switzerland			
	TBA	Tale of two tubes exploring mechanisms of failing human heart - focus on cardiac microtissues			
	S. 01-3	S. 02-3			
	Tomasz Kościołek	Przemysław Błyszczuk			
	Structural and Functional Genomics Group, Sano – Centre for Computational Personalised Medicine, Kraków, Poland	Jagiellonian University, Kraków, Poland			
	ТВА	Right heart in single cell RNAseq analysis			
	S. 01-4	S. 02-4			
	Ali Jawaid	Agnieszka Jaźwa-Kusior			
	Łukasiewicz Research Network - PORT Polish Center for Technology Development, Wrocław, Poland	lagiellonian University. Kraków. Poland			
	Interplay between lipid metabolism and microRNAs in the long-term effects and intergenerational transmission of childhood t	aum Endothelial cell senescence at the crossroads of inflammation and vascular dysfunction			
11.30 - 12.00 p.m.	Coffee break '+' - Exhibition Room				
12.00 - 1.00 p.m.	Opening lecture				
	Prof. Andrzej Lewenstam, PhD				
	Åbo Akademi University, Turku, Finland, AGH University of Krakow, Poland				
	Fast, Automated, and Integrated: Electrochemical Sensors and Algorithms Transforming Blood and Bioliguids Analysis				
	Medium Hall				
	Chairs: Prof. Robert Filipek, PhD				
1.00 - 2.30 p.m.	Session 3: Neuroinformatics, computational neuroscience, deep learning: perspectives on computing and the brain	Session 4: The Zebrafish Model: A Tool for Advancing Brain Research			
	Chair: Prof. Krzysztof Tokarski, PhD, Prof. Daniel Wójcik, PhD	Chair: Prof. Magdalena Chadzinska, PhD, Prof. Stefan Chlopicki, PhD			
	90 min, Medium Hall A	90 min, Medium Hall B			
	S.03-1	S. 04-1			
	Daniel Wójcik	Magdalena Chadzińska			
	Nencki Institute of Experimental Biology PAS, Warszawa, Poland	Jagiellonian University. Kraków, Poland			
	Neuroinformatics, computational neuroscience, deep learnina - what's in it for me?	From infection to neurodeaeneration - studies on the zebrafish model			
	S.03-2	S. 04-2			
	Chaitanva Chintaluri	Kinga Gawel			
	Institute of Science and Technology Austria. Vienna, Austria	Medical University of Lublin. Poland			
	Can Al open new doors? Ion channels and how to tame them	Panta rhei: the use of zebrafish in epilepsy research			
	5.03-3	S. 04-3			
	Piotr Maika	Justina Zmorzynska			
	Nencki Institute of Experimental Biology PAS. Warszawa, Poland	International Institute of Molecular Mechanisms and Machines. Polish Academy of Sciences, Warszawa, Poland			
	Al in diaital neuroanatomy	Modelina neuropsychiatric disorders in zebrafish			
	5.03-4	S. 04-4			
	Włodzisław Duch	Iza Wasilewska			
	Nicolaus Copernicus University Toruń Poland	Mossakowski Medical Research Institute Polish Academy of Sciences Warszawa, Poland			
	Perspectives from AL on intelligence	Role of Tmhim5 in the mitochondrial Ca2+ transnort in zehrafish hrain			
2.30 - 3.15 p.m.	Coffee break '+' - Exhibition Room	preie of rimemo in the integritation out i transport in teorogish bruin			
3 15 - 3 45 n m	Sponsor presentation				
9119 - 9149 p.m.	oponior presentation				

3.45 - 4.45 p.m.	Session 5: Presentation of ERC grants		
	S. 05-1		
	Janka Matrai European Research Council Executive Agency, Brussels, Belgium		
	S. 05-2		
	Sandra Siegert		
	Institute of Science and Technology Austria (ISTA), Klosterneuburg, Austria		
	Microglia-Neuron Interaction		
4.45 - 5.00 p.m.	Welcome ceremony		
	Film about Kraków and the Maj Institute of Pharmacology Polish Academy of Sciences - Medium Hall		
	Chairs: Honorary Committee & Organizing Committee		
5.00 - 6.00 p.m.	Inaugural lecture		
	Prof. Jan Bjaalie, MD, PhD		
	University of Oslo, Norway, EBRAINS AISBL, Brussels, Belgium		
	Harnessing Big Data in Neuroscience: Strategic Insights into Data Sharing and Machine Learning Applications		
	Medium Hall		
	Chairs: Professor Małgorzata Filip, PhD, Professor Joanna Pera, PhD		
6.00 - 9.00 p.m.	Welcome party		
	July 23, 202		
9.00 - 10.30 a.m.	Session 6: New models and tools for stem cell research	Session 7: Research methods and modelling in medical applications	
	Chair: TBA	Chair: Prof. Robert Filipek, PhD	
	90 min, Medium Hall A	90 min, Medium Hall B	
	S.06-1	5.07-1	
	Malgorzata Borowiak	Roman Major	
	Adam Mickiewicz University, Poznań, Poland	Institute of Metallurgy and Materials Science, Polish Academy of Science, Kraków, Poland	
	Beta cells and atypical diabetes	Simulations of Life: from Microscale-Organ-on-Chip to Macroscale- Artificial Patient as a Effective Tool for Dynamic Hemocompatibility Assessment	
	S.06-2	s.07-2	
	Agnieszka Rybak-Wolff	Patrycja Kwiek	
	Max Delbrück Center - Berlin Institute for Medical Systems Biology (MDC-BIMSB), Berlin, Germany	AGH University of Krakow, Poland	
	Brain organoids to model human brain diseases	Generative Models in Biomedical Imaging: From Data Scarcity to Data Abundance	
	S.06-3	S.07-3	
	Jonathan Arias	Krzysztof Szyszkiewicz-Warzecha	
	EMBL, Vilnius University, Vilnius, Lithuania	AGH University of Krakow, Poland	
	Characterization of the HLA class I landscape in the Lithuanian population for regenerative medicine applications	Modelling Transport of lons using Nernst-Planck and Poisson Equations in Medical Applications: from lon Selective Electrodes to	
		Biological Membranes	
	S.06-4	5.07-4	
	Tomasz Kamiński	Patrycja Domalik-Pyzik	
	Warsaw University, Warszawa, Poland	AGH University of Krakow, Poland	
	Novel droplet microfluidic methods for single-cell assays	Gradient Scaffolds for Gradient Tissue - Hydrogel Composites for Regeneration of Osteochondral Defects	
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 Jagiellonian University, Kraków, Poland Beyond dystrophin: novel targets for treatment of Duchenne muscular dystrophy 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	Session 9: Materials for medical applications	
	Chair: Prof. Paweł Zajdel, PhD; Severine Chaumont-Dubel, PhD	Chair: Prof. Aneta Frączek-Szczypta, PhD	
	90 min, Medium Hall A	90 min, Medium Hall B	
	S. 08-1	S.09-1	
	Philippe Marin	Isela Padilla Rosales	
	Iniversité de Montpellier. Centre National de la Recherche Scientifique. Institut National de la Santé et de la Recherche Médicale	AGH University of Krakow Poland. Institute of Applied Sciences and Technology of UNAM Mexico	
	Tarreeting the S-HTG recenter-mTOR again in schizophrenia, from treatment of symptoms to a disease modifying strategy	The notential of lanthanides unconversion annoarticles in himmedical annications	
	rangeling the strip receptor in roll one in senterphilema. Joint recurrient of symptoms to a ascase montying strategy	r ne potential of landhandes apeorter sion nanoparteres in bioincarcal applications	
	Guoria Chaumant Dubal	July zandra Panko	
	Severine Chaunon-Dubei Université de Mastenellier, Costre National de la Daskarska Scientifique, Jastitut National de la Casté et de la Daskarska	Alexisatiura beliku ACH Lloviserity of Krakow, Baland	
	Universite de Montpelner, centre National de la Recherche Scientingue, institut National de la Sante et de la Recherche Médicale de Montpelnier, centre National de la Recherche Scientingue, institut National de la Sante et de la Recherche		
	Meucaie, Montpeller, rance New Instants in clinary serotaania 5-HT6 recentor sianalina	Riafunctional solutions for dynamic cell cultures in vitro	
		S.09-3	
	Natalia Malikowska-Racia	Marta Wolciechowska	
	Mai Institute of Pharmacology Polich Academy of Sciences, Krakow, Poland	Rig Data Institute University of Oxford United Kingdom	
	Mig institute of Friaman Schology Folia Academy of Scholes, Krakow, Foliand	big bala instruct, oniversity of oxford, oniver kingdom	
	E oo a		
	5. US-4		
	Niduej Sataga	Ryszaru Wielowski	
	Faculty of Medicine, Medical University of Looz, Poland	Agen University of Krakow, Poland	
	Potential therapeutic use of serotonin type 6 receptor ligands in irritable bowel synarome (IBS): precinical evidence	Hybrid carbon composites as materials that can stimulate neural tissue: comparison of pyrolytic carbon and functionalized	
3.30 - 4.00 p.m.	Coffee break - Exhibition Room		
4.00 - 5.30 p.m.	Session 10: Brain resilience	Session 11: TBA IP PAS	
	Chair: Prof. Jan Manuel Rodriguez Parkitna, PhD	Chair: Klaudia Proniewska, PhD	
	90 min, Medium Hall A	90 min, Medium Hall B	
	S. 10-1	S. 11-1	
	Sara Xapelli	Klaudia Proniewska	
	Universidade de Lisboa, Lisbon, Portugal	Center for Digital Medicine and Robotics, Department of Bioinformatics and Telemedicine, Kraków, Poland	
	GIMM - Gulbenkian Institute for Molecular Medicine, Lisbon, Portugal		
	Neurogenesis and Depression: Exploring the Therapeutic Potential of Cannabinoid CB2 Receptors and Physical Exercise	тва	
	S. 10-2	S. 11-2	
	Muriel Koehl	Jan Kamiński	
	University of Bordeaux, Neurocentre Magendie, Bordeaux, France	Nencki Institute of Experimental Biology PAS, Warszawa, Poland	
	Adult neurogenesis and stress resilience	Predicting Neuropsychiatric Conditions from EEG Signals Using Large-Scale Data	
	S. 10-3	S. 11-3	
	Solveiga Samulènaité	TBA	
	Vilnius University. Vilnius. Lithuania	ТВА	
	Trainas from Within: Git Microbiota Drive the Development of Food Addiction		
	S 10.4		
	J. 1074 Anna Calam Andresianala		
	Anna Solarz-Anarzejewska Jachikuta of Dhusiatharamu and Ulaakh Sejanaan Anadomu of Dhusiat Education, Kataurian Daland		
	Institute of Physiotherapy and Health Sciences, Academy of Physical Education, Katowice, Poland		
	snaping Brain Kesilience to Stress: The Roles of Sex and Blood–Brain Barrier Dynamics		

	July 24, 2025		
9.00 - 10.30 a.m.	Session 12: Novel diagnostics methods in medicine	Session 13: Neuroimaging Innovations: Integrating Bioinformatics for Improved Analysis	
	Chair: Prof. Artur Rydosz. PhD	Chair: Bartosz Pomierny. PhD	
	90 min. Medium Hall A	90 min Medium Hall R	
	3.12-1	3. 15-1	
	Maciej Wielgosz	Michel Soares Mesquita	
	AGH University of Krakow, Poland	Medscopix, King's College London, UK	
	CyfroVet - Al in veterinary medicine	Optimizing Neuroimaging Pipelines for Enhanced Translational Insights	
	S. 12-2	S. 13-2	
	Sandra Zarvchta	Maria Elisa Serrano (Melisa)	
	AGH University of Krakow, Poland	King's College London, LIK	
	Pancratic Sogmattion Tochniquer: Pridaing Madical Imaging for Accurate 2D Visualization in Propagative Planning	Current analysis mathed in practicical DET; an evanious	
	Participatiti segmentation rechniques. Bhaging Mealtar induging for Actuate SD Visualization in Preoperative Planning	current analysis methods in prelimical PET. an overview	
	5.12-3	5. 13-3	
	Dominik Grochala	Eugene Kim	
	AGH University of Krakow, Poland	King's College London, UK	
	Exhaled breath analysis as a novel diagnostic tool for daily clinical practice	Imaging transcriptomics of genetically altered mouse models of brain disorders	
		S. 13-4	
		David Barry	
		France Crick Institute London LIK	
		Prenet with the in Plenet divel Prenet therein the series An electric	
		Reproducibility in Biomedical Research through Image Analysis	
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.m Plenary lecture 2		
	Prof. Steve Williams, PhD		
	Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, UK and Centre for Neuroimaging Science	es based at the South London and Maudsley Hospital, London, UK	
	Bridaina the Gap: Transitionina Brain Imaaina Techniaues from Lab to Clinic		
	Medium Hall		
	Chair Drofessor Madagerata Filip, DhD		
12.20 2.00 m m			
12.30 - 2.00 p.m.	Poster session 2		
	Coffee break '+' - Exhibition Room		
2.00 - 3.00 p.m.	Session 14: Personalized medicine-innovative treatments for civilization diseases	Session 15: Young investigator session	
	Medium Hall A	Medium Hall B	
	Chair: Joanna Wierońska, PhD	Chair: Katarzyna Głombik, PhD	
	90 min, Medium Hall A		
	\$ 14-1		
	Klaudia Kubiak		
	Medical University of Goansk, Poland		
	OGF and Poplar-Derived Compounds: A Dual Approach to Reprogram PDAC		
	S. 14-2		
	Wawrzyniec Lawrence Dobrucki		
	University of Illinois at Urbana-Champaign, IL, USA		
	The Power of Molecular Taraeted Imaging and its Implications for Disease Diagnosis and Personalized Treatment		
	\$ 14-3		
	loono Wierońska		
	Maj institute of Pharmacology Polish Academy of Sciences, Krakow, Poland		
	Personalized pharmacotherapy of schizophrenia in relation to observed symptoms		
3.00 - 3.30 p.m.			
	Closing & Award ceremony - Medium Hall A		
	Closing & Award ceremony - Medium Hall A Chairs: Professor Małgorzata Filip, PhD, Professor Joanna Pera, PhD		