

13rd International Conference Analytical Cytometry, SCIENTIFIC PROGRAM

SATURDAY

Plenary session AURELIUS	
	<i>Chairs: Karel Souček</i>
18:30	Opening lecture Ladislav Dušek (CZ)
19:00	Welcome drink

SUNDAY

lectures			posters	hands-on workshops						
Plenary session AURELIUS		Parallel session 2 CABERNET	Parallel session 3 SAUVIGNON		Frankovka [80m2]	Tramín [50m2]	Muller [40m2]	Thurgau [40m2]	Veltlín [20m²]	
	Chairs: Karel Souček, Veronika Niederlová			Poster viewing						
9:00	Opening									
9:10	Christina Zielinski									
9:45	Ján Remšík									
10:20	Coffee break									
	Chairs: Vítězslav Bryja, V. Pospíchalová									
10:55	Hana Polášek-Sedláčková									
11:30	Maximilian Haertinger									
12:05	Hind Medyouf									
12:40	Lunch									
	Chairs: Tomáš Kalina, Ondřej Pelák									
14:00	Julian Staniek									
14:35	Robert Balderas									
15:10	Awards - Publikace									
15:20	Coffee break									
	Chairs: Karel Souček, Lukáš Kubala									
16:00	CSAC meeting (members)		CYI session on career development							
		Chairs: Veronika Niederlová								
17:00		17:00	Panel discussion Tomáš Kalina, Hind Medyouf, Hana Polášek-Sedláčková, Christinu Zielinski							
18:00			18:00		Poster session I Authors of odd-numbered posters are present (Posters 1, 3, 5, ...)					
20:00	Social event									

MONDAY

lectures			posters	hands-on workshops						
Parallel session AURELIUS [400]		Parallel session 2 CABERNET [130]	Parallel session 3 SAUVIGNON [50]	Atrium	Frankovka [80m2]	Tramín [50m2]	Muller [40m2]	Thurgau [40m2]	Veltlín [20m ²]	
CLINICAL CYTOMETRY		IMAGING CYTOMETRY		9:00						
	Chairs: Tomáš Jelínek, Ondřej Hrušák		Chairs: Vítězslav Bryja, Karel Souček							
9:00	Sarah Bonte									
9:35	Jens V. Stein									
10:10	Iva Benešová: Proton radiotherapy and lymphocyte dynamics in head and neck cancer	10:10	Štěpán Čada: Quantitative Analysis of B-cell Migration: From Phenotype to Molecular Mechanisms							
10:30	David Starostka: Interpretative validation of flow cytometry in integrative diagnostic haemato-oncology	10:30	Eliška Miková: Sphingosine 1-phosphate receptor-1 controls T cell mechanosensitivity							
10:50	Ondřej Venglár: Monitoring of CAR T cells and non-CAR T immune subsets with standardized 8-color flow cytometry panel utilizing dry reagents	10:50	Paolo Fagherazzi: Quantitative AI-based DNA fiber (qAID) workflow using scanR high-content imaging system							
11:10	Coffee break									
CLINICAL CYTOMETRY		EDU SESSION (ENG) CYTOMETRY BASICS 1			EXTRACELLULAR VESICLES					
	Chairs: Marcela Hortová Kohoutková, Jolana Vosáhllová		Chairs: Ondřej Pelák, Jozef Janda, Jan Svoboda			Chairs: Vendula Hlaváčková Pospíchalová, Gabriela Ambrožová				
11:40	Jan Frič: Long-Term Impact of Pediatric Sepsis on Immune Function: Immunophenotypic and Metabolic Shifts in Myeloid Cells	11:40	Jan Svoboda: Basic principles of flow cytometry	11:40	Vendula Hlaváčková Pospíchalová: Getting to Know Extracellular Vesicles: Between Promise and Pitfalls					
12:00	Michaela Reiterová: Novel EuroFlow Quality Assessment on B-cell Precursor Acute Lymphoblastic Leukemia Minimal Residual Disease. Program development and Four Rounds of Implementation	12:00		12:00	Antonín Hlaváček: Absolute Quantification of Nanoparticles by Optical Microscopy and Deep Learning: A Simple Yet Powerful Tool for Nanoparticle Analysis					
12:20	David Zihala: Selective depletion of B-cell lineage subsets during treatment with anti-BCMA vs anti-GPRC5D bispecific antibodies (bsAbs) underlies different risk of infections in patients with multiple myeloma (MM)	12:20	Jan Musil: Fluorochromes and their spectral properties	12:20	Agnieszka Razim: Developement of a universal chemically-defined medium for the analysis of „stressed“ bacterial EVs in the context of undernutrition					
					12:40	Lunch workshop:	Lunch workshop:	Lunch workshop:	Lunch workshop:	

12:40	Zuzana Tomášiková: Peripheral Blood Immune Profiling Reflects Esophageal Inflammation in pediatric patients suffering from Eosinophilic Esophagitis	12:40	Ondřej Pelák: Compensation and Unmixing	12:40	Gabriela Ambrozová: Macrophage EVs: Transporters of Pro-Inflammatory Cargo
13:00					
Lunch (+ CYL: Mikulov City Hunt)					
EDU SESSION (EN) CLINICAL CYTOMETRY		EDU SESSION (ENG) CYTOMETRY BASICS 2		SINGLE CELL BIOLOGY AND OMICS	
	<i>Chairs: Veronika Kanderová, Marcela Vilková</i>		<i>Chairs: Ondřej Pelák, Jozef Janda, Jan Svoboda</i>	<i>Chairs: Vítězslav Bryja</i>	
14:30	Daniel Thurner: How to prepare material other than blood and bone marrow for reliable flow cytometry analysis?	14:30	Antonín Ptáček: Controls for building a successful flow cytometry experiment	14:30	Pavel Abaffy: Bridging Two Worlds: Merging Flow Cytometry with Single-Cell RNA-Sequencing
14:50	Zuzana Kahounová: Preparation of single-cell suspensions from solid tissues for reliable flow cytometry analysis	14:50	Ioanna Papatheodorou: Flow cytometry data analysis: unveiling the journey from gates to graphs	14:50	Anjana Anilkumar Sithara: Composition and fitness of T and NK cells in extramedullary myeloma tumor microenvironment
15:20	Aleš Efenberk, Veronika Kanderová: Advanced immunophenotyping of peripheral blood leukocytes	15:20	Jozef Janda: Sample preparation for flow cytometry	15:10	Radek Sindelka: Regeneration-Initiating Cells Identified in Xenopus Tail Regrowth: Insights Into Tumor Plasticity and Microenvironmental Remodeling
		15:35	Matyáš Šima: Basic principles of cell sorting	15:30	Veronika Niederlová: Manipulating effector and memory fates in CD8+ T Cells: A novel Tpm transitional state and the role of TGF-β
15:50	Coffee break				
EDU SESSION (CZ) KLINICKÁ CYTOMETRIE - diskuze			SINGLE CELL BIOLOGY AND OMICS		
	<i>Chairs: Veronika Kanderová, Lucie Říhová</i>		<i>Chair: Vítězslav Bryja</i>		
16:30	Karolína Jankovičová: Populace a subpopulace lymfocytů v klinické imunologické laboratoři – jejich využití v praxi a návaznost na digitalizaci ve zdravotnictví		16:30 Jan Stuchlý: Lineage Switching in Pediatric Acute Lymphoblastic Leukemia Resolved by Single-Cell Multi-Omics		
16:45	Vladimíra Řezáčová: NCLP and its use in flow cytometry of haematocological examinations		16:45 Antonia Mikulová: ROR-1+ B cells from peripheral blood comprise atypical B cell population that potentially represents precursors of the malignant clone in chronic lymphocytic leukaemia		
17:00	Veronika Kanderová: Referenční meze pro klinickou cytometrii		SINGLE CELL OMICS ROUND TABLE		
17:20			<i>Chair: Vítězslav Bryja</i>		
			17:00 Lukáš Valíhrach, Boris Tichý, TBD: Introduction of facility/highlights		
			18:00		

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19:30	CYI: Pub kvíz		
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TUESDAY

lectures					
Parallel session AURELIUS [400]		Parallel session 2 CABERNET [130]		Parallel session 3 SAUVIGNON [50]	
EXPERIMENTAL CYTOMETRY		BOTANY AND ZOOLOGY		NEW METHODS AND DATA ANALYSIS	
	Chairs: Ondřej Štěpánek, Veronika Niederlová		Chairs: Petr Bureš, Tomáš Urfus		Chair: Ondřej Pelák
9:00	Jana Balounova: FAM83H/SACK1H shapes thymic stromal architecture and postnatal lymphopoiesis via CK1 interaction	9:00	Petr Bureš: Divergent trajectories of genome evolution: The impact of centromere drive on shaping genome architecture, species richness and competitiveness of ferns and angiosperms	9:00	Tomáš Kalina: TviblinDI algorithm identifies branching developmental trajectories of human B cell development and describes abnormalities in RAG-1 and WAS patients
9:20	Daniela Kužilková: CD molecules nomenclature 2025: Antibody validation and expression profiling of Immune system G protein-coupled receptors (GPCRs)	9:20	Michal Hroneš: Genome size of bulbous monocots in the northern cradle of their diversity: patterns, gaps and challenges	9:20	Jan Vltčeček: The Journey from Vasculature to (Micro)fluidic-Based In Vitro Models
9:40	Aneta Skotnicová: Immunogenicity of RSV Vaccine in Lung Transplants	9:40	Lucie Kobrová: Using flow cytometry to explore the Boraginaceae family? Challenge accepted.	9:40	Lenka Andrejsová: Innovation and practical potential of γH2AX detection by flow cytometry
10:00	Adela Vavrova: T-MAPS: Novel surface markers for measurable residual disease monitoring in pediatric T-cell acute lymphoblastic leukemia	10:00	Vladislav Kolarčík: Endopolyploidy is negatively correlated with genome size in karyologically uniform tomatoes	10:00	
10:20	Michal Santocki: Changes in bone marrow niche during sepsis investigated using iPSC-derived bone marrow organoids	10:20	Petr Koutecký: Methodological aspects of using flow cytometry to sample ploidy levels over the whole flora of multiple sites	10:20	
10:40	Coffee break				
EXPERIMENTAL CYTOMETRY		BOTANY AND ZOOLOGY		NEW METHODS AND DATA ANALYSIS	
	Chairs: Alena Hyršlová Vaculová, Lukáš Kubala		Chairs: Petr Bureš, Tomáš Urfus		Chair: Ondřej Pelák
11:10	Daniela Rubanová: Systemic administration of hyaluronic acid: pharmacokinetics and therapeutic potential in rheumatoid arthritis	11:10	Jaroslav Rohel: Endopolyploidy in natural populations of diploid plants and their polyploid relatives	11:10	Ioanna Papatheodorou: Dysregulated neutrophil mobility and granulopoiesis as a long-term signature of post-acute sequelae of COVID
11:30	Türkan Portakal: LPS triggers ER stress-mediated hybrid EMT in human expandable lung epithelial cells	11:30	Mahmoud Said: Flow Cytometric Karyotyping of Wheat-Aegilops Addition Lines Facilitates Dissection of Ae. biuncialis and Ae. geniculata Genomes into individual chromosomes	11:30	Ondřej Venglář: ImmunoMMap: Insights into Immune and Genomic Alterations Underlying the Resistance to Bispecific Antibodies in Multiple Myeloma by High Dimensional Full Spectrum Cytometry and Exome Sequencing
11:50	Karel Souček: Understanding the role of desmoglein 2 in preserving the epithelial phenotype of breast cancer cells	11:50	Petr Šmarda: Advantages of endopolyploidy over polyploidy	11:50	Michaela Simova: Clustering vs. Gating in High-Dimensional Cytometry: Practical Evaluation Using a 22-Color Mouse Panel
12:10	Discussion	12:10	Discussion	12:10	Discussion
	Chairs: Karel Souček, Veronika Kanderová, Tomáš Jelínek				
12:20	Closing, awards (posters)				
12:50	Lunch				

	<i>hands-on workshops</i>				
	Frankovka [80m2]	Tramin [50m2]	Muller [40m2]	Thurgau [40m2]	Veltlín [20m ²]