

13th International Conference Analytical Cytometry

4.-7. 10. 2025
Hotel GALANT, Mikulov
Czech Republic



list of posters

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LIST OF POSTERS

Poster session I, Sunday, 18:00-19:00

Poster walk for authors of odd-numbered posters (P1, P3, P5 ...)

Poster session II, Monday, 18:00-19:00

Poster walk for authors of even-numbered posters

(Posters P2, P4, P6 ...)

BOTANY AND ZOOLOGY

- P1. Patterns of genome size variation in the cytologically neglected genus *Curculigo* (Hypoxidaceae)**
Alena Uvířová, Olomouc, CZ
- P2. Quality control of cultured ovine MSCs: cell viability, cell cycle, ALDH stemness and pluripotency**
Andrej Baláži, Lužianky, SK
- P3. Endopolyploidy in annual ruderal plants: A solution how to build cell of large big cells while keeping small seed size?**
Anna Hrádková, Brno, CZ
- P4. Analysis of the ovine MSCs phenotype in a comprehensive manner**
Jaromír Vašíček, Nitra, SK
- P5. Flow cytometry elucidates complex evolution of the genus *Dactylorhiza***
Klára Bilá, Prague, CZ
- P6. The evolutionary interplay between genomic traits and gametophyte longevity, spore morphology, and sporophyte growth forms in ferns**
Klára Panda, Brno, CZ
- P7. Advantage of endopolyploidy over polyploidy under cold**
Kvido Lorenc, Brno, CZ
- P8. The flow cytometry as a valuable tool in the study of *Pulmonaria* (Boraginaceae)**
Lucie Koblřová, Olomouc, CZ
- P9. Cross direction matters: Genome size variation in hybridization between diploid lineages of *Ficaria***
Lucie Koblřová, Olomouc, CZ
- P10. How do apple trees reproduce? Flow cytometry as a tool to investigate not only apomixis in the genus *Malus*.**
Václav Polcar, Prague, CZ

- P11. Reproduction modes in hemisexual dogroses accurately determined with flow cytometry**
Vladislav Kolarčík, Košice, SK
- P12. Uncovering genome size variation in bat lilies (Genus Tacca, Taccaceae)**
Vojtěch Blažek, Olomouc, CZ
- P13. Optimized ATAC-seq library preparation from flow-sorted maize pollen nuclei harboring accessory B chromosomes**
Petr Urbiš, Olomouc, CZ

CLINICAL AND TRANSLATIONAL CYTOMETRY (IMMUNOLOGY, HEMATOLOGY AND CANCER)

- P14. Immature neutrophil release and enhanced NETotic potential in NMO patients**
Eliška Krčmářová, Prague, CZ
- P15. The capacity of probiotic strain escherichia coli O83:K24:H31 to limit the severity of colitis**
Jiří Hrdý, Prague, CZ
- P16. Bronchoalveolar lavage cell composition detected by flow cytometry**
Lucie Rihová, Brno, CZ
- P17. Phase I clinical trial of CD19 chimeric antigen receptor T cells with an enhanced TSCM immunophenotype generated via the piggyBac transposon system for the treatment of refractory B-cell malignancies: Preliminary results**
Martin Štach, Prague, CZ
- P18. Clonality assessment of selected lymphocyte subpopulations – technical aspects of analysis by flow cytometry**
Renata Bezděková, Brno, CZ
- P19. Profound T lymphocyte and DNA repair defect characterizes schimke immunosseous dysplasia**
Adam Klocperk, Prague, CZ
- P20. Detection of melanoma in cerebro-spinal fluid by flow cytometry – a case report**
Bartosz Perkowski, Katowice, PL
- P21. Flow cytometry in the diagnosis of feline lymphoproliferative disorders: A retrospective evaluation (2020–2024)**
Edita Jeklová, Brno, CZ
- P22. The effect of BCG vaccination and latent infections on clinical progression of sepsis and COVID-19**
Kamila Bendíčková, Brno, CZ
- P23. Flow cytometry-based detection of low-grade periprosthetic infection in synovial fluid**
Markéta Trajerová, Olomouc, CZ

- P24. Case of missing chains or limitations of intracytoplasmic light chain testing in multiple myeloma with excessive serum free light chain levels**
Martin Novák, Olomouc, CZ
- P25. Cytometric detection of C3d+ immature erythrocytes in a PNH patient treated with a C5 inhibitor**
Martin Novák, Olomouc, CZ
- P26. Immunophenotyping of macrophage subtypes in osteoarthritic synovial membrane and infrapatellar fat pad**
Tereza Dýšková, Olomouc, CZ
- P27. Hemodilution calculator: A tool for bone marrow aspirate quality assessment**
Tereza Podolská, Prague, CZ
- P28. Mutations in IKKG causing immune dysregulation – from phenotype to function**
Veronika Kanderová, Prague, CZ
- P29. The importance of immunophenotypic reanalysis and morphological evaluation in detecting lymphoma cells in cerebrospinal fluid of hepatosplenic T-cell lymphoma: A case report**
Zala Ciglar, Ljubljana, SI
- P30. IL-10-driven regulation of monocyte functionality and metabolism in traumatic injury**
Gabriela Blažková, Brno, CZ
- P31. Analysis of AML cells in vitro: Sensitivity to CK1 inhibition vs. genetic background**
Hana Plešingerová, Brno, CZ
- P32. Mapping of CD8 T cell subsets and cytokine profiles underlies self-reported health status following COVID-19**
Petra Lázníčková, Brno, CZ
- P114. Evaluation of new anti-Tdt clone and fluorochromes**
Aneta Skotnicova, Prague, CZ

DATA ANALYSIS

- P33. Challenges of large data analysis in flow cytometry**
Matěj Nemec, Prague, CZ
- P34. Regulation of the p53 network on translational level**
Alžběta Fislová, Brno, CZ
- P35. Enhancing the Efficacy of MDM2 Inhibitors through Combination Therapy**
Zdenek Andrysik, Brno, CZ

EXPERIMENTAL CYTOMETRY (IMMUNOLOGY, HEMATOLOGY AND CANCER)

- P36. Purification of Glia from fresh and fixed mouse brain using the WOLF G2 cell sorter**
Adonary Munoz, San Diego, CA, USA

- P37. 50 shades of fluorescence to follow immune response (Saffir) with spectral flow cytometry**
Cyrille Mionnet, Marseille, FR
- P38. Genome doubling and beyond: Endoreduplication dynamics in polyploid plants under stress**
Eliška Petříková, Prague, CZ
- P39. Phenotypic profiling of T cell subsets in philadelphia-negative myeloproliferative neoplasms**
Michaela Machů, Brno, CZ
- P40. KDM5 in chemoresistance of neuroblastoma (NBL) cells**
Tomáš Eckschlager, Prague, CZ
- P41. Immunometabolic changes in AML cell lines spheroids as a model of leukemic microenvironment**
Adéla Nováková, Prague, CZ
- P42. Inhibition of lactosylceramide synthases B4GALT5 or B4GALT6 enhances oxaliplatin-induced cell death in colon cancer cells**
Alena Hyršlová Vaculová, Brno, CZ
- P43. Can peroral administration of high-molecular weight hyaluronan and pectin affect T cell subsets in mice?**
Anna Kocurková, Brno, CZ
- P44. Impact of cytokines and soluble plasma proteins on the immune profile of acute myeloid leukemia patients**
Antonín Ptáček, Prague, CZ
- P45. Overview of some markers in cell lines of patients with glioblastoma multiforme**
Dana Mareková, Prague, CZ
- P46. Mutual epitope interference between anti-CD3 and anti-TCR antibodies in flow cytometric analysis**
Daniel Kolařík, Vestec, CZ
- P47. Regulation of proliferation during cardiomyogenesis**
Eliška Kramná, Brno, CZ
- P48. Modified tryptamine compounds abrogate inflammatory cues in AhR dependent manner in intestinal epithelial cell model**
Gerardo Vázquez, Brno, CZ
- P49. Characterization of the CD2⁺CD8^{low} $\gamma\delta$ T cell subpopulation in pigs: Biological entity or methodological artifact?**
Hana Štěpánová, Brno, CZ
- P50. Skyrin action in colorectal cancer cell lines**
Ivana Barčáková, Košice, SK
- P51. Mismatch AIRE mutations and C. albicans response**
Jan Věcek, Prague, CZ

- P52. Radioprotection effect of vitamin C**
Jana Cizkova, Hradec Králové, CZ
- P53. Polycyclic aromatic hydrocarbons (PAHs) acting as AhR ligands may alter glucose production and/or transport in human hepatocyte-like HepaRG cells**
Jiří Petráš, Brno, CZ
- P54. Gadolinium doped carbon dots as a theranostic agent of neurodegenerative diseases**
Jiřina Medalová, Brno, CZ
- P55. Utilizing BioID to identify interaction partners of haspin kinase**
Karel Souček, Brno, CZ
- P56. Assessment of human sperm pathology by flow cytometry using a panel of sialic acid binding lectins**
Katarína Michalková, Bratislava, SK
- P57. Potential of targeting NLRP3 inflammasome in non-small cell lung cancer: Insights from 2D and 3D in vitro models**
Kateřina Kalkušová, Prague, CZ
- P58. Therapeutic potential of nanobodies targeting the tumor antigen CAIX**
Kateřina Koždoňová, Brno, CZ
- P59. Evaluation of mitochondrial, ER and oxidative stress endpoints induced by polycyclic aromatic hydrocarbons in human hepatocyte-like cells**
Kateřina Večeřová, Brno, CZ
- P60. Biocompatibility of CMC-PEG hydrogels and their use as drug vectors**
Lenka Kratochvílová, Brno, CZ
- P61. Cell-based assays for early detection of immunogenicity risk for protein and peptide therapeutics**
Lenka Šindlerová, Brno, CZ
- P62. Gut microbiota determines the bioavailability and metabolic fate of orally administered hyaluronan**
Lukáš Kubala, Brno, CZ
- P63. The role of endoplasmic reticulum stress in immune surveillance and its relevance for cancer immunotherapy**
Lukáš Moráň, Brno, CZ
- P64. Prenatal exposure to environmental chemicals and the impact on immunity in early childhood**
Maja Klimentić, Brno, CZ
- P65. Casein kinase 1 δ/ϵ inhibition alters T cell development**
Michaela Chorvátová, Brno, CZ
- P66. Mapping yolk SAC-derived hematopoietic lineages: A hemato-endothelial perspective**
Michaela Simova, Prague, CZ

- P67. Optimization of monocyte-like cell line THP-1 differentiation for a quick biomaterial immunocompatibility testing**
Natálie Slovenská, Brno, CZ
- P68. Radiation-induced fibrotic damage, epithelial-mesenchymal plasticity and hyaluronic acid nanoparticles**
Nikola Plištilová, Hradec Králové, CZ
- P69. Surface protein profiling of childhood B-cell precursor acute lymphoblastic leukemia using spectral flow cytometry**
Nino Palavandishvili, Prague, CZ
- P70. Challenges in flow cytometric analysis of B cell populations co-cultured with stromal feeder cells**
Olga Vondálová Blanářová, Brno, CZ
- P71. Effect of tumor-conditioned medium on neutrophil heterogeneity**
Ondřej Vašíček, Brno, CZ
- P72. Hyaluronic acid nanoparticles as a potential radioprotective agent**
Ondřej Jan Doležal, Hradec Králové, CZ
- P73. The effects of exogenous hyaluronic acid on pre-adipocytes**
Petra Raptová, Brno, CZ
- P74. Application of the CRISPR/Cas9 method in the preparation of MPO-deficient hematopoietic progenitor cells**
Radka Holcová, Brno, CZ
- P75. Effect of selected cytokines on endometrial receptivity**
Tomáš Marčíšin, Brno, CZ
- P76. TGF- β decreases NK cell mobility and cytotoxic efficacy in complex in vitro models of the leukemia microenvironment**
Veronika Švubová, Prague, CZ
- P77. Tumor hypoxia and nonphotoactivated hypericin – Two factors affecting metastasis in lung adenocarcinoma cells**
Viktória Dečmanová, Košice, SK
- P78. Circulating tumor cells-derived xenograft as a model of castration-resistant prostate cancer**
Zuzana Kahounová, Brno, CZ
- P79. Cytometry applications in biodosimetry screening**
Zuzana Šinkorová, Hradec Králové, CZ
- P80. Time dependent macrophage activation in the initial phase of tumorigenesis in animal model**
Zuzana Valaskova, Bratislava, SK
- P81. The role of TSG-6 protein in the modulation of t helper cells**
Martina Körtingová, Brno, CZ

IMAGE CYTOMETRY

- P82. VERLO: A novel imaging cell sorter for enhanced analysis of tumor infiltration by immune cells**
Adonary Munoz, San Diego, CA, USA
- P83. Revolutionizing stem cell selection: A label-free approach using the verlo image-guided cell sorter**
Adonary Munoz, San Diego, CA, USA
- P84. Identifying extracellular vesicles binding and internalization in blood cell subsets by imaging flow cytometry**
Haley Pugsley, Fremont, CA, USA
- P85. FANCI and RTEL1 facilitate pre-replication complex disassembly following replisome collision**
Simran Negi, Brno, CZ
- P86. Collagen foam hydrogels as scaffolds of in vitro skin models**
Anežka Hlaváčová, Brno, CZ
- P87. Quantification of key diagnostic bone marrow cells using automated digital cytomorphology**
David Starostka, Havířov, CZ
- P88. Critical misclassifications influence the reliability of automated digital bone marrow cytomorphology**
David Starostka, Havířov, CZ
- P89. Comparative migration analysis of healthy human B cell populations**
Nela Kolčáková, Brno, CZ

NEW METHODS

- P90. Simultaneous, high-throughput detection of RNA and protein biomarkers using the Orion imaging system and HCR Gold for comprehensive analysis of tumor samples in clinical trials**
Dagmar Brechlerova, Prague, CZ
- P91. Highly accurate profiling of leukocyte composition from bulk peripheral blood with targeted digital cytometry**
Jakub Razga, Glostrup, DK
- P92. Automating antibody cocktail preparation and sample staining with the C-FREE Pluto LT System**
Kavita Mathi, Stanford, CA, USA
- P93. Application of cytometry in toxicological testing in vitro: Translating research into practice via validation within the OECD test guidelines program**
Markéta Dvořáková, Prague, CZ

- P94. Quantitative cell–cell interaction assay using imaging flow cytometry**
Ondřej Naar, Brno, CZ
- P95. Ascites-derived organoids as predictive models for personalized treatment of ovarian cancer**
Denisa Kučová, Brno, CZ
- P96. Spatiotemporal changes of heterotypic human pancreatic ductal adenocarcinoma spheroids in vitro**
Ivana Acimovic, Brno, CZ
- P97. Cellular response to patient specific oscillatory shear stress conditions in microfluidic aneurysm models**
Patrícia Kittová, Brno, CZ
- P98. Integrative cytometry and single-cell transcriptomics for profiling rare neural populations**
Viktoria Kulinich, Vestec, CZ

SINGLE-CELL GENOMICS

- P99. Combining Vizgen's MERSCOPE® spatial transcriptomics and InSituPlex® spatial proteomics profiling to unravel the complexities of the tumor-immune microenvironment**
Dagmar Brechlerova, Prague, CZ
- P100. Development of t cells in patients with congenital and acquired thymic defect**
Ondřej Vladyka, Prague, CZ
- P101. Integrative Cell Identification Reveals Human Recent Thymic Emigrants Across Multiomic Platforms**
Pavla Bohacova, St. Louis, MO, USA
- P102. Intratumoral heterogeneity of p53 and ATF4 activity in colon carcinomas**
Alžběta Pupíková, Brno, CZ
- P103. Alterations in endometrial immune cell composition in recurrent implantation failure: A reanalysis of single-cell RNA-Seq datasets**
Eva Kriváková, Košice, SK

SMALL PARTICLES, EVS

- P104. Role of serum extracellular vesicles as mediators of increased systemic inflammation in patients with sleep apnoea**
Jiřina Procházková, Brno, CZ
- P105. Bacterial stimulation alters lipid composition of macrophage-derived extracellular vesicles: Implications for immune modulation**
Júlia Orlovská, Brno, CZ

- P106. Characterization and immunomodulatory role of staphylococcus aureus-derived vesicles in infective endocarditis**
Kristyna Turkova, Brno, CZ
- P107. Insight into the properties of Candida albicans extracellular vesicles with a focus on active molecules important for host-pathogen interaction**
Lucia Paulovičová, Bratislava, SK
- P108. Interaction of macrophage-derived and bacterial extracellular vesicles with target cells**
Marek Oslacký, Brno, CZ
- P109. Separation of blood-derived extracellular vesicles using droplet-based spectral sorting**
Maria Gracia Garcia Mendoza, Fremont, CA, USA
- P110. Lipidomic profiling of DU145 tetraspanin deficient cells and extracellular vesicles**
Martina Dhima, Brno, CZ
- P111. Precise and efficient extracellular vesicles purity detection with explorer nano flow cytometer**
Mendel Engelaer, Amsterdam, NL
- P112. Molecular insights into the immune modulation by membrane vesicles of Lactiseibacillus rhamnosus CCM7091**
Miriám Sandanusová, Brno, CZ
- P113. Conventional flow cytometry as a tool for extracellular vesicle characterization and initial assessment for subsequent surfaceome profiling**
Zuzana Vince Kázmérová, Bratislava, SK