

13th International Conference Analytical Cytometry

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



hands-on
workshops
description

www.conference.csac.cz

HANDS-ON WORKSHOPS



Beckman Coulter

LUNCH WORKSHOPS

(Aurelius hall)

Sunday, October 5, 2025, 12:40

CytoFLEX mosaic – spectral evolution of CytoFLEX family platform

Andreas Wicovsky

New cutting-edge spectral addition to CytoFLEX family: Introduction, features and benefits of the system

Monday, October 6, 2025, 13:00

CytoFLEX nano – Innovative flow cytometry for counting and characterization of extra-cellular vesicles

Andreas Wicovsky

Standardization of EV's measurement with high sensitivity in one package. With CytoFLEX nano you can be certain about your analysis of EVs.

HANDS-ON WORKSHOPS

(Veltlín hall)

Sunday, October 5, 2025, 14:35

CytoFLEX mosaic

Beckman Coulter Team

Instrument set up, modular architecture advantages, data analysis and features of spectral analysis on CytoFLEX mosaic

Monday, October 6, 2025, 9:00

DxFLEX – flexible IVDR compliant flow cytometer- hands on session

Beckman Coulter Team

13 color IVDR flow cytometer live. Introduction of new features and IVDR reagent updates.

Monday, October 6, 2025, 10:10

Kaluza/Kaluza C and Cytobank analysing software- live demo, questions and answers session

Beckman Coulter Team

Practical session about our analytical softwares. Whether you are curious about Kaluza or Kaluza C (IVDR) software or multidimensional cloud based software Cytobank. Come to our workshop and bring your own data and discuss them with our experts....

Monday, October 6, 2025, 11:40

CytoFLEX mosaic

Beckman Coulter Team

Instrument set up, modular architecture advantages, data analysis and features of spectral analysis on CytoFLEX mosaic

Monday, October 6, 2025, 14:30

CytoFLEX nano - overview of the system, data analysis

Beckman Coulter Team

Highly standardized measurement of Extracellular Vesicles on innovative flow cytometer is crucial for accurate results achievement. Introduction, overview and data analysis.

Monday, October 6, 2025, 16:30

CytoFLEX SRT- cell sorting made easy and automated

Beckman Coulter Team

CytoFLEX family of Flow Cytometers have been known for their extraordinary sensitivity and resolution connected with ease of use and reliability. Now allowing to sort cells an easy and automated way. Introduction and applications for 4 way cell sorter CytoFLEX SRT.

Tuesday, October 7, 2025, 9:00

DuraCLONE panels, Supernova Dyes and new Infrared dyes - dry cocktails and bright dyes for flow cytometry

Beckman Coulter Team

Dry cocktails Duraclone, bright polymer dyes SuperNova (now also IVDR compliant) and new Infra Red dyes available for your flow cytometry. We are delighted to show you all....

Tuesday, October 7, 2025, 10:10

CytoFlex

Beckman Coulter Team

CytoFLEX flow cytometers have been known for years for their's reliable high sensitivity detection of dim populations as well as small particles analysis with different laser excitation sources. Choice of up to 6 different excitation sources (lasers) and up to 21 fluorescence detection path, sensitive Avalanche Photo Diode Detection and more than 50 different configurations available makes this research flow cytometer perfect match for every research lab.



BD Biosciences

LUNCH WORKSHOPS

(Tramín hall)

Sunday, October 5, 2025, 12:40

BD Solutions for clinical diagnostics

During our first lunch workshop we will be hosting our application specialist Ivana Andrejčinová.

BD solution brings the standardization of leukemia and lymphoma immunophenotyping one step forward, improving laboratory efficiency and enabling reliability and accuracy of results for clinical decisions.

As the understanding and treatment of cancer evolves and improves, the importance of monitoring post-remission cancer survivors has become paramount to improving patient outcomes. By monitoring for MRD, low levels of cancer cells following treatment can be detected, alerting if the disease is still present or if there is a signal of recurrence. This is a key element of the patient care continuum that helps clinicians and physicians recognize when cancer recurs and aids in the timely treatment of patients.

Join BD during this lunch live session to learn more about our full portfolio of clinical solutions from instruments through reagents to analysis tools.

Monday, October 6, 2025, 13:00

Launch of the BD FACSDiscover™ A8 Cell Analyzer

BD will be hosting Mark Dessing who will be running live remote session from Heidelberg on BD FACSDiscover™ A8 instrument.

BD FACSDiscover™ A8 Cell Analyzer is packed with groundbreaking innovations including BD SpectralFX™ Technology and BD CellView™ Image Technology. Our advanced spectral technology gives you increased flexibility by maximizing and simplifying the choice of fluorochromes detectable per laser. Obtain detailed information on cells with real-time imaging that was previously invisible in traditional flow cytometry experiments.

During this lunch session Mark will show live the main features of this new unique spectral cell analyzer. We will be broadcasting this live demo directly from our European Center for Single Cell Solutions in Heidelberg. Use this opportunity to get the true experience on the workflows and learn what is possible with this unique cell sorter.

HANDS-ON WORKSHOPS

(Tramín hall)

Sunday, October 5, 2025, 14:35

Hands-on demonstration of BD FACSymphony™ A1, BD FACSLytic™ BD FACSMelody and BD Rhapsody™ instruments

Everyone who joins us during these time slots will have the opportunity to see and try out several BD instruments. BD Biosciences will be presenting two flow cytometer analyzers – BD FACSymphony™ A1, BD FACSLytic™, and the user-friendly cell sorter BD FACSMelody™.

During our hands-on workshops, you'll also get to explore the complete workflow of a successful multi-omics experiment using the BD Rhapsody™ Single-Cell Analysis System.

We warmly encourage you to take advantage of this unique opportunity to meet with BD Biosciences application specialists Jiří Sinkora and Ivana Andrejčínová to discuss your prospective panels or best practices for working with BD flow cytometers.

Monday, October 6, 2025, 9:00

Introduction to FlowJo™ 11 and BD® Research Cloud

Come and explore FlowJo™ v11 — now with a new intuitive interface, powerful analysis tools, and user-friendly features for flow cytometry data analysis. FlowJo™ v11 introduces innovative capabilities for advanced data processing, offering an immersive experience and faster performance while maintaining a comprehensive feature set for a wide range of users.

Monday, October 6, 2025, 10:10

Overview of BD Single-Cell Multiomics solutions

This workshop will be led by our application specialist Jens Fleisher, who will present an overview of our comprehensive single-cell multiomics (scM) portfolio, including instruments and reagents. BD Biosciences now offers high-quality single-cell multiomics instruments, reagents, and bioinformatics tools that deliver reliable and reproducible data essential for translational research. With our microwell-based scM instruments, you can now generate more proteomics and genomics data than ever before.

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Monday, October 6, 2025, 16:30

Hands-on demonstration of data acquired on BD FACSDiscover™ A8 Cell Analyzer

Take advantage of this unique opportunity, where our application specialist Jens Fleischer will demonstrate live how to analyze data acquired on the BD FACSDiscover™ A8 Cell Analyzer. You'll be able to experience firsthand how easily data can be analyzed using our advanced spectral and imaging parameters in BD FACSCorus™ Software.

Tuesday, October 7, 2025, 9:00

Tips & Tricks in flowcytometry

During this session, Jiří Šinkora will share his many years of experience in the field of flow cytometry. You will learn about some lesser-known concepts, and there will also be enough time to discuss any current issues you might be facing in your current flow experiments.



I.T.A.-Intertact

LUNCH WORKSHOPS

(Frankovka hall)

Sunday, October 5, 2025, 12:40

Deep cell lunch seminar

Beyond the Marker: AI-Powered Label-Free Morphology Profiling for Single-Cell Characterization and Sorting

What if the most profound biological stories are hidden not on a cell's surface, but within its very structure? This talk introduces a transformative, label-free approach that challenges the limits of marker-based cytometry.

We will unveil the REM-I platform, which uses deep learning and advanced microfluidics to sort live cells based on intrinsic morphology. In real-time, its AI interprets subtle features—like organelle rearrangement and chromatin texture—to build a high-dimensional, label-free profile for each cell.

Through compelling case studies in oncology and cell therapy, you will discover how this technology uncovers rare populations and dynamic cell states that are invisible to standard markers.

This isn't about replacing your workflow; it's about supercharging it. Join us to learn how to use morphology as a primary, high-content readout and unlock a powerful new axis of information in your single-cell research.

Monday, October 6, 2025, 13:00

Sony Biotechnology lunch seminar

From Complexity to Clarity: Advancing Flow Cytometry with the ID7000

Join us for an interactive lunch workshop designed to showcase how the SONY ID7000 spectral cell analyzer brings efficiency and confidence to complex flow cytometry workflows. Whether you're an early-career researcher, clinician, or experienced flow cytometry user, this session will demonstrate how the ID7000's advanced features can improve your research with high-dimensional and reproducible data. We will introduce key innovative features in both hardware and software, including the high-performance optical system with an extensive PMT detector array, the robust and efficient automatic sample loader for high-throughput applications, and the intuitive software that allows for confident navigation through data analysis workflows. Special attention will be given to the powerful autofluorescence extraction and spectral unmixing techniques, which help maximize data quality even in complex sample analyses. You will also learn about standardization capabilities that support instrument stability and long-term reliability, which are critical for reproducible research. Lastly we are introducing the concept of smooth assay transfer: panels developed on the ID7000 can be seamlessly ported to the new SONY FP7000 spectral cell sorter.

Sunday, October 5, 2025, 14:35

Samplix

Xdrop®: Advancing Single-Cell Functional Analysis through Droplet Flow Cytometry

In this presentation, Dr. Bárbara Schlicht will introduce Xdrop, a platform that encapsulates single cells into flow cytometry-compatible droplets, enabling high-throughput functional analysis using standard flow cytometers and sorters. We will demonstrate how Xdrop can be applied across various research fields, including immunology and cell therapy, by showcasing practical case studies and results from recent technical notes. This session will highlight how combining Xdrop with traditional flow cytometers and sorters allows for the analysis of not only single cells but also the entire cellular environment contained within the droplets. This enables the sorting of single cells based on functional readouts and secretome profiling, providing researchers with unparalleled insights into cellular behavior and interactions.

Monday, October 6, 2025, 9:00

Mindray

Mindray Bricyte MX 3-laser 14-color IVD-R-compliant cytometer for immunology and hemato-oncology

Step up your cytometry game with the all-new Mindray BriCyte MX - a three-laser, 14-color, IVD-R-compliant powerhouse. Equipped with both a carousel and a 96-well plate loader, this benchtop instrument delivers high-throughput performance without compromising sensitivity. Whether you're running standard FoxFlow TBNK Hexatest immunophenotyping or pushing the boundaries with new Mindray hemato-oncology panels (up to 10-color), the BriCyte MX offers unparalleled reliability and versatility. Experience it firsthand—come see how effortless high-parameter cytometry can be.

Monday, October 6, 2025, 10:10**Rethinking Spectral Cytometry: The SONY ID7000 Advantage**

Spectral flow cytometry continues to transform high-parameter analysis, and the SONY ID7000 spectral cell analyzer is designed to support the growing needs of spectral flow cytometry. In this session, we will explore the cutting-edge hardware and software features that make the ID7000 a standout platform for researchers seeking quality, performance, and reliability. From its high-performance optical system and flexible laser configurations to its high-throughput automatic sample loader and specialized probe agitation, the ID7000 is engineered for robust and adaptable workflows. We will also highlight the intuitive software interface that guides users through complex data analysis, including powerful auto-fluorescence extraction and spectral unmixing. Join us to explore how the SONY ID7000 empowers confident, state-of-the-art spectral cytometry.

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Deepcell

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This isn't about replacing your workflow; it's about supercharging it. Join us to learn how to use morphology as a primary, high-content readout and unlock a powerful new axis of information in your single-cell research.

Monday, October 6, 2025, 16:30

Sony

FP7000: High-Parameter Spectral Sorting Redefined

Join us for a 20-minute workshop on the Sony FP7000 Spectral Cell Sorter, engineered for unmatched flexibility and efficiency in high-parameter cytometry. With an optical design mirroring the ID7000 analyzer (6 lasers, 182 detectors), the FP7000 enables direct transfer of multicolor panels—eliminating the need for redesign or re-validation. This analyzer-to-sorter synergy creates a seamless pipeline, accelerating complex workflows while enhancing reproducibility and research impact.

Discover how real-time spectral unmixing and 6-way sorting at up to 25,000 events per second combine with guided workflows and automation to reduce setup time and operator variability. We will also demonstrate the FP7000's ability to deliver ultra-pure, highly viable cells, even from rare or dim populations, ensuring precision in downstream applications.

Join us to explore how the FP7000 advances spectral sorting—offering ease of migration, cutting-edge performance, and powerful applications for today's most demanding cytometry tasks.

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**LUNCH WORKSHOP***(Sauvignon hall)***Monday, October 6, 2025, 13:00****Six Years of Single-Cell Transcriptomics: Lessons Learned and Future Directions****Lukas Valihrach, Pavel Abaffy**

This lecture offers an overview of our six years with single-cell transcriptomics. We'll discuss method advancements, share lessons learned from our research, and highlight key biological insights. We'll also explore new directions for single-cell analysis and its future in uncovering biological complexities

HANDS-ON WORKSHOPS*(Frankovka hall)***Sunday, October 5, 2025, 14:00****Introduction to Single-Cell Transcriptomics Data Analysis****Pavel Abaffy**

This workshop offers a practical introduction to single-cell transcriptomics data analysis. Participants will learn the fundamental steps for processing and interpreting single-cell RNA sequencing datasets. We'll discuss essential concepts and methods to help you get started with this powerful technology.

Sunday, October 5, 2025, 15:30**Exploring Biology with Spatial Transcriptomics****Lukas Valihrach**

This lecture will introduce spatial transcriptomics, a powerful technology that enables the mapping of gene expression directly within tissue sections. It explores how these methods offer a new way to see cellular organization and function in their natural setting, changing how we understand biological processes and disease.

Monday, October 6, 2025, 9:35**Targeting the interest****Daniel Nesrsta**

Try to target your own section on the slide or one of prepared slides and see how well you could operate CytAssist. You will transform into the researcher doing the Visium experiment you learn how easy the operating CytAssist experiment is.

Monday, October 6, 2025, 10:50

Interactive troubleshooting for Single cell Chromium platform

Daniel Nesrsta

Having problems during your experiment or seeing that your QC result is different from the example could be really stressful. Let's take a look at user troubleshooting, what can you do to try and resolve the issue or speed up the resolution of the issue and get your experiment back on the right tracks."

Monday, October 6, 2025, 12:20

Spatial OMICS with 10X Genomics: closing the gap for Multiparametric Analysis in Solid Tissues

Andrés Ramírez

Spatial omics complement flow cytometry by adding spatial context often missing in conventional gene expression analyses, either bulk or sorted cells. While flow cytometry offers high-throughput phenotypic profiling, spatial omics map molecular features within intact tissues. Together, they enable deeper insights into cellular heterogeneity, interactions, and microenvironments—bridging molecular, phenotypic, and spatial data for comprehensive biological understanding"

Tuesday, October 7, 2025, 9:35

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SVEN BioLabs

HANDS-ON WORKSHOPS

(Muller hall)

Monday, October 6, 2025, 9:00

The basics of Imaging Cytometry, or what it brings you compared to conventional flow cytometers

Ondřej Hovorka

Monday, October 6, 2025, 16:30

Application of image cytometry and use of AI for advanced image analysis

Tomáš Jendrulek

LUNCH WORKSHOPS

(Thurgau hall)

Sunday, October 5, 2025, 12:40

Introducing Cytek Aurora Evo, the New Standard of Full Spectrum Cytometry

The Cytek Aurora Evo system is the latest advancement in spectral flow cytometry. Built on the trusted foundation of the Cytek Aurora and Northern Lights systems, the Cytek Aurora Evo system has been reengineered to carry forward the proven reliability and reproducibility of the Cytek Aurora system, while introducing high-throughput and automation capabilities. As pioneers in spectral flow cytometry, Cytek remains at the forefront of innovation with our proprietary Full Spectrum Profiling (FSP) technology.

Monday, October 6, 2025, 13:00

Elevate your Spectral sorting experience for small and large particles with Cytek Aurora CS.

The Cytek Aurora CS system provides remarkable flexibility, enabling the use of a wide array of new fluorochrome combinations without requiring the reconfiguration of the detectors. Sharing the same optical system as the Cytek Aurora analyzer allows for the easy transfer of experiments from the analyzer to the Aurora CS system without the need to modify your panels. The state-of-the-art optics and low-noise electronics ensure high resolution and high sensitivity for identifying and isolating rare cell populations deep into the gating hierarchy. The result is a system that delivers exceptional performance at the single-cell level which can resolve the most challenging cell populations, such as cells with high autofluorescence or low expression of key biomarkers, regardless of assay complexity. Equipped with advanced sorting features and monitoring tools, the Cytek Aurora CS system can isolate viable and functional cells for downstream studies.

HANDS-ON WORKSHOPS

(Thurgau hall)

Sunday, October 5, 2025, 14:35

From IDEAS to Intelligence: AI-Enhanced ImageStreamx data analysis

The ImageStream system is a multispectral imaging flow cytometer that captures high-resolution images of cells at high throughput. Paired with the powerful IDEAS image analysis software, it enables objective quantification of hundreds of cellular features - not only based on fluorescence intensity, but also on morphology, probe localization, and co-localization. To support advanced analysis needs, the software now integrates both Machine Learning and Deep Learning, providing more automated and scalable solutions for data interpretation. In this workshop, we will demonstrate how Artificial Intelligence (AI) enhances the objectivity and efficiency of image-based cytometric analysis. Examples will include:

- Differentiation of live and dead cells based on morphology
- Classification of leukemic cells and their normal counterparts

- Quantification of micronuclei
- and more...

Join us to explore how these cutting-edge tools can transform your imaging cytometry workflows.

Monday, October 6, 2025, 9:00

Precise and efficient Extracellular Vesicles purity detection with ExoPlorer Nano Flow Cytometer

The Explorer Nano-Flow Cytometer redefines nanoparticle analysis as the all-in-one solution for revealing nanoscale secrets with groundbreaking precision. Combining superior sensitivity, resolution, and throughput, this instrument delivers comprehensive insights across the full 5–3000 nm spectrum, enabling simultaneous size distribution mapping, bead-free absolute counting, and multi-parameter biochemical profiling. In this study we underline the fact that reliable measurements of extracellular vesicles (EV) concentrations are essential for biomarker research. Moreover, different instruments measures different sample concentrations. Using ExoPlorer nano flow cytometer we have been able to accurately measure EVs concentration and size.

Monday, October 6, 2025, 10:10

Introducing Cytek Aurora Evo, hands-on experience on a smarter & faster Full Spectrum Flow Cytometer

The Cytek Aurora Evo system is the latest advancement in spectral flow cytometry. Built on the trusted foundation of the Cytek Aurora and Northern Lights systems, the Cytek Aurora Evo system has been reengineered to carry forward the proven reliability and reproducibility of the Cytek Aurora system, while introducing high-throughput and automation capabilities.

High-Throughput: Sample flow rates **up to 200 $\mu\text{L}/\text{min}$** using both tubes and plates without sacrificing resolution.

Data Reproducibility: Standardized instrument setup and hardware harmonization, ensuring reproducible data across systems, locations, and time.

Assay Versatility: Expanded dynamic range of scatter detection that enables the resolution of both small particles and large cells within a single system.

Multicolor Capabilities: Generate high quality, high parameter data and extract deeper insights from precious samples.

Monday, October 6, 2025, 11:40

Introducing VERLO: Image-Guided & Gentle Cell Sorter

VERLO is providing conventional flow cytometry and cell sorting along with the ability to perform imaging analysis to identify and sort cells based on morphology, subcellular localization and more. The VERLO instrument expands the capabilities of gentle benchtop microfluidic cell sorting. With two lasers and nine colors, plus 3 label-free parameters, it maintains simple workflows for either bulk sorting or single-cell dispensing into 96- or 384-well plates with an integrated cell dispensing and sample cooling.

Spatial Information: Captures images of each cell. In addition to fluorescence intensity, the VERLO provides spatial information such as cell morphology and marker localization.

Enhanced Resolution: Imaging of subcellular structures and analysis of spatial variations in brightfield, darkfield, and fluorescent images.

Increased Precision Sorting: Following the acquisition and processing of cell images, imaging features are incorporated into the gating strategy to define cell phenotypes.

Multivariate Datasets: Combines high-throughput sampling with single-cell image acquisition and measures large number of features from cell images, providing more comprehensive data.

Monday, October 6, 2025, 14:30

Shedding Light on Extracellular Vesicles with Imaging Flow Cytometry

Accurate quantification and characterization of EVs remain challenging due to their small size -exosomes typically range from 30 to 100 nm in diameter. Conventional PMT-based flow cytometry also struggles with EV detection, hindered by both size limitations and the low refractive index of these vesicles. To address these challenges, we have adopted the Cytex Amnis ImageStream imaging flow cytometry platform, which combines the statistical power of flow cytometry with the enhanced resolution of microscopy. Its time-delay integration (TDI) imaging system provides increased sensitivity for detecting small particles. In this workshop, we will demonstrate the application of the ImageStream technology for EV immunophenotyping and for analyzing their uptake by immune cells. We will also discuss strategies to optimize EV detection and analysis.

Monday, October 6, 2025, 16:30

Nano Flow Cytometry session: The Critical Role of Refractive Index Settings in Light Scattering-based Particle Sizing

Nanoflow cytometry has been widely applied for size measurement of extracellular vesicles (EVs) and other nanoparticles due to its high throughput and single-particle resolution. The technique estimates particle size based on light scattering signals, where the Refractive Index (RI) of particles plays a critical role in determining measurement accuracy. Using ExoPlover Nano Flow Cytometer, we analyzed the same standard bead sample using different RI assumptions to systematically evaluate how RI selection affects particle size readouts. The results demonstrate that variations in RI settings significantly influence the measured size distribution and related statistical parameters. This approach highlights the importance of appropriate RI parameter selection in Nano Flow Cytometry to ensure accuracy and comparability in nanoparticle sizing.

Tuesday, October 7, 2025, 9:00

Hands-on cell sorting session: Easily sort large and fragile cells with WOLF Gentle Cell Sorter

The WOLF Cell Sorter was designed and created by a team of scientists and engineers who wanted to solve a classic challenge in biological research: how to sort cells of high quality effectively and easily. NanoCollect has created an entirely new type of microfluidic cell sorter that extends modern flow cytometry methods. By using proven detection technologies, NanoCollect focuses on innovative cartridge technology (commonly known as a “microfluidic chip”) and accessible, intuitive software that makes the operation simple and safe for researchers and their samples. The WOLF benchtop flow cytometry cell sorter allows

for the gentle separation of cell types in bulk sorting and the isolation and dispensing of individual cells into plates. Single-cell sorting is completed in 96- or 384-well plates when using the WOLF with the N1 Single Cell Dispenser. This flexibility and performance allows users to complete sorting experiments across different research fields and application areas like single-cell genomics, cell line development, gene editing, antibody discovery, stem cell cloning, genomic sample prep, and more.