



Österreichische Gesellschaft für Zytometrie
Austrian Society for Cytometry

AlpenFlow 2024

23. – 25. May 2024



Kongress & Theaterhaus
Bad Ischl, Austria

Location: *Kongress & TheaterHaus Bad Ischl*
Kurhausstraße 8
4820 Bad Ischl, Austria

Thursday, 23.05.2024

07:30 – 08:30 **Registration**

08:30 – 12:00 **Workshops I & II**

08:30 – 10:00 *Workshop I* (3 in parallel, each WS 1.5 hours)

1. BD Life Sciences Biosciences

“Seeing is believing: How Image-enabled spectral flow cytometry radically changes traditional flow and single-cell multiomics”

Jens Fleischer, Becton Dickinson, Germany & Gert van Isterdael, Ghent, Belgium

2. Liquor diagnostics

“Immune phenotyping of CSF cells - special considerations and current trends in diagnostic & research”

Catharina Gross, Münster, Germany & Andrea Harrer, Salzburg, Austria

3. Particle Metrix

“Nanoparticle Tracking Analysis with ZetaView - more than size and concentration”

Ingrid Bloß, Particle Metrix, Germany

10:00 – 10:30 Break

10:30 – 12:00 *Workshop II* (3 in parallel, each WS 1.5 hours)

1. Beckman Coulter

“Cutting-edge flow cytometry for the standardisation and characterisation of extracellular vesicles”

- Unlocking the unknowns of EV with flow cytometry

Anis Larbi, Beckman Coulter, Germany

- Standardization of CytoFLEX Flow Cytometer for EV research

Maximilian Härtinger, Vienna, Austria

- CytoFLEX nano is here! Pushing the boundaries of EV characterization

Anis Larbi, Beckman Coulter, Germany

2. Miltenyi Biotec

“Spatial Biology in multiple dimensions - From 3D imaging to same section multiomics”

Stefan Eulitz, Miltenyi Biotec GmbH, Germany

3. Biolegend

“Single-Cell Multiomics with TotalSeq™: From Multicolor Flow Cytometry to Simultaneous RNA and Protein Analysis”

Samuel Körner, Biolegend, Germany

12:00 – 13:00 **Lunch & Registration**

Workshop III

13:00 – 14:30 *Workshops III* (3 in parallel, each WS 1.5 hours)

1. Standard Biotoools

“Imaging Mass Cytometry: Maximize your results”

- In this workshop, we'll delve into the intricacies of data analysis for highly multiplexed imaging experiments performed with Imaging Mass Cytometry. We will talk about various cell segmentation pipelines, exploring established strategies and introducing a diverse range of analysis software. During the course of the workshop, we will also talk about and introduce new features, including the possibility of performing whole slide imaging experiments on the Hyperion XTi Imaging System.

David Guet, Standard BioTools, France

2. Sample preparation from tissues and advanced cell culture models

Beate Rinner & Eleonore Fröhlich & Matteo Villa, Graz, Austria

3. ThermoFisher Scientific

“Image-enhanced Flow Cytometry and Single Cell high-speed sorting with the Attune CytPix & Bigfoot”

Thomas Veitinger & Werner Einig, ThermoFisher Scientific, Switzerland

14:30 – 14:45 Break

14:45 – 14:55 **Opening of the AlpenFlow**

Multiparameter Imaging

14:55 – 15:20 Highly multiplexed imaging mass cytometry identifies predictive spatial immunotypes in cancer

Bertram Bengsch, Freiburg, Germany

15:20 – 15:45 Comparative Fluorescence Microscopic Morphometry

Arndt Rohwedder, Linz, Austria

15:45 – 16:10 Understanding Lymphatic Capillary Drainage of Interstitial Fluid

Frank Assen, Vienna, Austria

16:10 – 16:35 Exploring the enigmatic role of $\gamma\delta$ T cells in cancer

Kilian Wistuba-Hamprecht, Tübingen, Germany

16:35 – 17:05 Break

Multiparameter Flow I

17:05 – 17:30 Radio flow cytometry reveals [¹⁸F]FDG uptake in a KRAS induced lung cancer model is driven by immune cells but not tumor cell metabolism

Cécile Philippe, Vienna, Austria

17:30 – 17:55 Immunomics of Non Small Cell Lung Cancer

Martina Sykora, Salzburg, Austria

- 17:55 – 18:20 Immunophenotyping in Hemophagocytic Lymphohistiocytosis
Manuel Trebo, Innsbruck, Austria
- 18:20 – 18:45 Profiling matters - discrete immunological endophenotypes in early multiple sclerosis are associated with distinct disease trajectories
Catharina Gross, Münster, Germany
- 19:00 – 21:30 **Get together** – Kongress & TheaterHaus Bad Ischl

Friday, 24.5.2024

Multiparameter Flow II

Key note lecture

- 8:45 – 9:30 High-dimensional cytometry in the spectral era: new metrics to achieve a 50-color panel
Florian Mair, Zürich, Switzerland
- 9:30 – 9:55 New therapies need new diagnostics – flow cytometric detection of CAR T-cells
Ines Peschel-Schaar, Innsbruck, Austria
- 9:55 – 10:20 Evaluation of active signaling pathways as a novel tool to stratify patients suffering from Rheumatoid Arthritis
Johannes Fessler, Graz, Austria
- 10:20 – 10:50 Break

High Dimensional Data Analysis

Moderation: Alexander Tolios

- 10:50 – 11:15 Open-source tools for the analysis and automated processing of flow cytometric data
Julian Gebauer, Bad Salzuflen, Germany
- 11:15 – 11:40 Breaking dimensionality borders – approaches to finding differences between groups in the Euclidean space of flow cytometry data
Jakob Theorell, Stockholm, Sweden
- 11:40 – 12:05 Worst case scenario - Lessons learned by the Imaging and Optics Facility after a severe cyberattack.
Bernhard Hochreiter, Klosterneuburg, Austria
- 12:05 – 13:15 Lunch

Extracellular Vesicles

- 13:15 – 13:40 *Flow Cytometry* - Standardize and calibrate your instrument
Andreas Spittler, Vienna, Austria

- 13:40 – 14:05 *NTA - Scattering Misconceptions in EV Research*
Johannes Österreicher, Vienna, Austria
- 14:05 – 14:30 *AMNIS - Small extracellular vesicles derived from multipotent adipose stromal cells in peripheral nerve regeneration - jack of all trades, master of none?*
Maximilian Härtinger, Vienna, Austria
- 14:30 – 14:55 *CyTOF - Tellurium-based labeling of the extracellular vesicle proteome (TeLEV) enables high-dimensional single-cell analyses of EV recipients*
Daniel Bachurski, Cologne, Germany
- 14:55 – 15:20 *ONI Nanoimager - Analyzing EV Heterogeneity by Super-Resolution Microscopy*
Martin Wolf, Salzburg, Austria

15:20 – 15:45 Break

Microbiology

Moderation: Alexander Kirschner

- 15:45 – 15:55 *Introductory lecture to the session*
Alexander Kirschner, Vienna, Austria
- 15:55 – 16:25 *Ecological forces dictate microbial community assembly processes in bioreactor systems*
Susann Müller, Leipzig, Germany
- 16:25 – 16:45 *Domestic hot-water boilers harbour active thermophilic bacterial communities distinctly different from those in the cold-water supply*
Thomas Egli, Feldmeilen, Switzerland
- 16:45 – 17:05 *A Spotlight on Flow Virometry for Assessing Water Quality and Treatment Efficiency*
Claudia Kolm, Krems, Austria
- 17:05 – 17:25 *Competition experiments reveal evolutionary advantage from transposon DNA in bacteria*
Roderich Römheld, Vienna, Austria
- 17:25 – 17:45 *Evaluating the effect of candidate prebiotics in the human gut microbiota by activity-based cell sorting and targeted isolation*
Hamid Rasoulimehrabani, Vienna, Austria

17:45 – 18:15 Break

18:15 *Lebenslanges Bergsteigen*
Peter Habeler, Mayrhofen, Zillertal, Austria



19:30 – 23:00 **Common Dinner in the Cafe-Restaurant Zauner**
pre-registration required – fee applies 30€

Saturday, 25.5.2024

Workshops IV & V

9:00 – 10:30 *Workshop IV* (3 in parallel, each WS 1.5 hours)

1. Multicolor Flow Cytometry

A systematic step-by-step guide to design spectral flow cytometry panels from 5 to 50 colors

Florian Mair, Zürich, Switzerland

2. Sysmex

New era of multi-disciplinary workflow improvements in clinical flow cytometry

Johanna Engelage, Sysmex, Sweden & Almedina Kurtaj, Sysmex, Austria

3. Sony

Maximizing Sensitivity, Removing Subjectivity - New Developments in Sony's Spectral Technology

Martin Baumgart, & Gaëtan Riou, Sony, United Kingdom

10:30 – 10:45 Break

10:45 – 12:15 *Workshop V* (3 in parallel, each WS 1.5 hours)

1. Flow cytometry in the biomedical swine model

Kerstin Mair & Tobias Käser, Vienna, Austria

2. Cytex

Next-Generation Flow-Cytometry for Measurable Residual Disease in Acute Myeloid Leukemia and new developments from Cytex

Adrian Schwarzer, Greifswald, Germany & Knut Petkau, Cytex Biosciences, Amsterdam, The Netherland

3. Antibody validation for flow cytometry

Beate Posch, Innsbruck, Austria

Organisation:

Lena Müller

Medical University of Vienna, Core Facilities, Mass Cytometry, Vienna, Austria

Beate Rinner

Medical University Graz, Core Facility Alternative Biomodels & Preclinical Imaging, Graz, Austria

Sieghart Sopper

Medical University Innsbruck, Core Facility Flow Cytometry, Innsbruck, Austria

Andreas Spittler

Medical University of Vienna, Core Facility Flow Cytometry & Surgical Research Laboratories, Vienna, Austria

Alexander Tolios

Medical University of Vienna, Department of Blood Group Serology and Transfusion Medicine, Vienna, Austria

Approbation:

The conference of the "Austrian Society for Cytometry" (23.-25.5.2024) is approved for the Diploma Training Program of the ÖÄK with **23 Medical DFP Points** and by *biomed austria - Austrian Professional Association of Biomedical Analysts* with **30 CPD points**.

Speakers and Presenters:

Assen, Frank

Medical University Vienna, Department of Dermatology, Vienna, Austria

Bachurski, Daniel

University of Cologne, Mildred Scheel School of Oncology (MSSO) Cologne-Bonn, Cologne, Germany

Baumgart, Martin

Sony Biotechnology Europe

Bensch, Bertram

University Freiburg, Faculty of Medicine, Department of Medicine II, Translational Hepatogastroenterology, Freiburg, Germany

Bloß, Ingrid

Particle Metrix

Egli, Thomas

Microbes in Water GmbH, Feldmeilen, Switzerland

Einig, Werner

ThermoFisher Scientific

Engelage, Johanna

Sysmex Sweden

Eulitz, Stefan

Miltenyi Biotec GmbH

Fessler, Johannes

Medical University Graz, Otto Loewi Research Center, Division of Immunology, Graz, Austria

Fleischer, Jens

Becton Dickinson

Fröhlich, Eleonore

Medical University Graz, Core Facility Imaging, Graz, Austria

Gebauer, Julian

MVZ Labor Krone GbR, Bad Salzuflen, Germany

Gross, Catharina

Westfälische Wilhelms-Universität Münster, Institute of Translational Neurology, Münster, Germany

Guet, David

Standard Biotoools

Habeler, Peter

Mayrhofen, Zillertal, Austria

Harrer, Andrea

University of Salzburg, Department of Neurology, Salzburg, Austria

Härtinger, Maximilian

Medical University Vienna, Department of Plastic, Reconstructive and Aesthetic Surgery Research Laboratories, Vienna, Austria

Hochreiter, Bernhard

Institute of Science and Technology Austria - ISTA, Imaging and Optics Facility, Klosterneuburg, Austria

Käser, Tobias

Vetmeduni, Institute of Immunology, Vienna, Austria

Kirschner, Alexander

Medical University Vienna, Institute for Hygiene and Applied Immunology, Vienna, Austria

Körner, Samuel

BioLegend

Kolm, Claudia

Karl Landsteiner University of Health Sciences, Division Water Quality & Health, Krems, Austria

Kurtaj, Almedina

Systemex Austria GmbH

Larbi, Anis

Beckman Coulter

Mair, Florian

ETH Zurich, Institute of Molecular Health Sciences, Zurich, Switzerland

Mair, Kerstin

Vetmeduni, Institute of Immunology, Vienna, Austria

Müller, Susann

Helmholtz Centre for Environmental Research – UFZ, Department Applied Microbial Ecology, Leipzig, Germany

Österreicher, Johannes

LBI for Traumatology, Vienna, Austria

Peschel-Schaar, Ines

University of Innsbruck, Central laboratory, Innsbruck, Austria

Petkau, Knut

Cytek Biosciences

Philippe, Cécile

Department of Biomedical Imaging and Image-Guided Therapy

Posch, Beate

Medical University Innsbruck, Department of Internal Medicine V, Innsbruck, Austria

Rasoulimehrabani, Hamid

University of Vienna, Department of Microbial Ecology (DOME), Vienna, Austria

Rinner, Beate

Medical University Graz, Core Facility Alternative Biomodels & Preclinical Imaging, Graz, Austria

Riou, Gaëtan

Sony Biotechnology Europe

Römhild, Roderich

Institute of Science and Technology Austria - ISTA, Klosterneuburg, Austria

Rohwedder, Arndt

Johannes Kepler University Linz, Zentrum für Medizinische Forschung, Core Facility Imaging, Linz, Austria

Schwarzer, Adrian

Universitätsmedizin Greifswald, Greifswald, Germany

Spittler, Andreas

Medical University Vienna, Core Facilities, Core Facility Flow Cytometry, Vienna, Austria

Sykora, Martina Maria

Paris-Lodron-University Salzburg, Research, Salzburg, Austria

Theorell, Jacob

Karolinska University Hospital Huddinge, Department of Medicine, Huddinge, Sweden

Tolios, Alexander

Medical University Vienna, Department of Blood Group Serology and Transfusion Medicine, Vienna, Austria

Trebo, Manuel

Medical University Innsbruck, Department of Internal Medicine V, Innsbruck, Austria

Veitinger, Thomas

ThermoFisher Scientific

Van Isterdael, Gert

VIB Flow Core, Ghent, Belgium

Villa, Mateo

Medical University Graz, Division of Rheumatology and Immunology, Graz, Austria

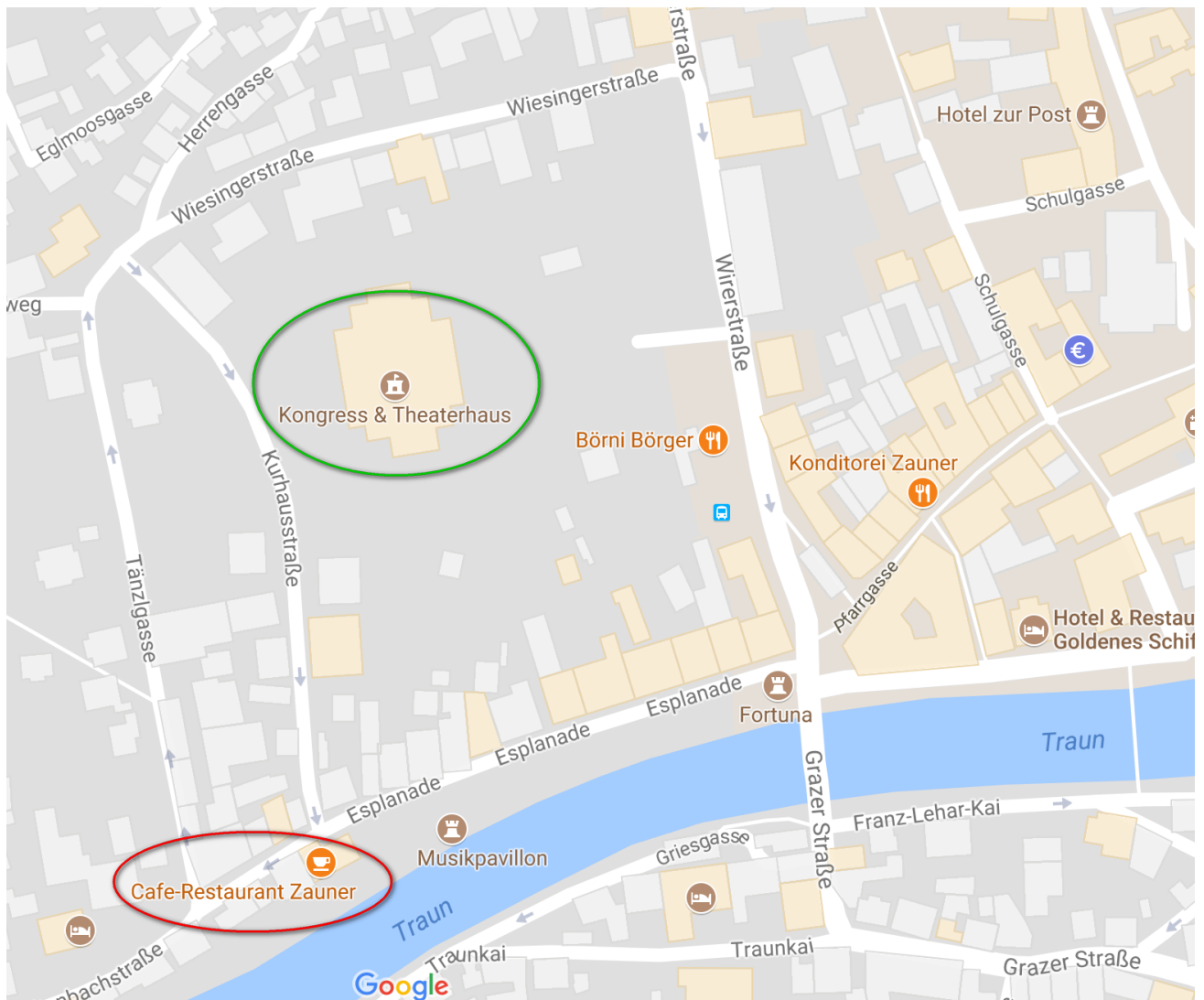
Wistuba-Hamprecht, Kilian

German Cancer Research Center (DKFZ), Skin Cancer Unit, Immunomonitoring & Cancer Immunology, Heidelberg, Germany

Wolf, Martin

Paracelsus Medical University, Institute of Experimental and Clinical Cell Therapy, Salzburg, Austria

The **joint dinner** for pre-registered participants takes place in the "**Cafe-Restaurant Zauner**", Hasnerallee 2 (Esplanada), 4820 Bad Ischl (red circle).



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Sponsors



Imprint:

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