

24th International Mass Spectrometry Conference

27 August – 2 September 2022, Maastricht, The Netherlands

FINAL PROGRAMME

Maastricht Exhibition &
Congress Centre (MECC)
Forum 100
6229 GV Maastricht
The Netherlands



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Saturday 27 August 2022

Short Courses day 1

09:00 Start short courses day 1
10:30 Morning break
12:30 Lunch
15:00 Afternoon break
17:00 End of short courses day 1

Short course 1 - Ion Mobility Spectrometry
Lecturers: Valerie Gabelica & Tim Causon

Short course 2 - Advanced MS data Analysis
Lecturers: Pratik Jagtap & Tim Griffin

Short course 3 - Imaging Mass Spectrometry
Lecturers: Martina Marchetti-Deschman & Eva Cuyppers

Short course 4 - Tandem Mass Spectrometry
Lecturers: Vicki Wysocki & Ljiljana Pasa-Tolic

Short course 5 - Cross-linking Mass Spectrometry
Lecturers: Juri Rappsilber & Pascal Albanese

Short course 6 - Lipidomics
Lecturers: Steve Blanksby & Michal Holcapek

Short course 7 - Biopharma & Native MS
Lecturers: Sarah Cianferani & Valentina Datri

Short course 8 - Glycomics
Lecturers: Guinevere Lageveen-Kammeijer & Noortje de Haan

Short course 9 - Clinical Proteomics
Lecturers: Sander Piersma & Irene Bijnsdorp

Short course 10 - Computational Proteomics
Lecturers: David Tab & Quentin Giaigianetto



Sunday 28 August 2022

Short Courses day 2

09:00 Start short courses day 2

10:30 Morning break

12:30 Lunch

15:00 End short courses day 2

Short course 1 - Ion Mobility Spectrometry

Lecturers: Valerie Gabelica & Tim Causon

Short course 2 - Advanced MS data Analysis

Lecturers: Pratik Jagtap & Tim Griffin

Short course 3 - Imaging Mass Spectrometry

Lecturers: Martina Marchetti-Deschman & Eva Cuypers

Short course 4 - Tandem Mass Spectrometry

Lecturers: Vicki Wysocki & Ljiljana Pasa-Tolic

Short course 5 - Cross-linking Mass Spectrometry

Lecturers: Juri Rappsilber & Pascal Albanese

Short course 6 - Lipidomics

Lecturers: Stephen Blanksby & Michal Holcapek

Short course 7 - Biopharma & Native MS

Lecturers: Sarah Cianferani & Valentina D'Atri

Short course 8 - Glycomics

Lecturers: Guinevere Lageveen-Kammeijer & Noortje de Haan

Short course 9 - Clinical Proteomics

Lecturers: Sander Piersma & Irene Bijnsdorp

Short course 10 - Computational Proteomics

Lecturers: David Tab & Quentin Gai Gianetto



Sunday 28 August 2022

Conference Programme

16:30 – 17:00 Welcome ceremony in the plenary room – Auditorium 1-2

17:00 – 17:30 **Plenary: TITLE TO BE ANNOUNCED**

Prof. Paola Picotti
*ETH Zürich, Institute of
Molecular Systems
Biology*

17:30 – 18:00 **Plenary: #807 - Highly multiplexed imaging of
tissues with subcellular resolution by imaging mass
cytometry**

Prof. Bernd Bodenmiller
*University of Zürich, ETH
Zürich*

18:00 – 20:30 Welcome reception in the exhibition area

19:00 – 21:30 Affiliates dinner



Monday 29 August 2022

08:30 – 09:15 Plenary session in the plenary room – Auditorium 1-2

08:30 – 09:15 **Plenary: #804 - Getting our fats straight: an international adventure in isomer-resolved lipidomics**

Prof. Stephen Blanksby
Queensland University of Technology

09:15 – 09:30 Coffee break
09:30 – 11:30 Parallel sessions (morning)
11:30 – 13:00 Poster sessions (A) & coffee break
13:00 – 14:00 Lunch break & vendor shows
14:00 – 15:30 Poster sessions (A) & coffee break
15:30 – 17:30 Parallel sessions (afternoon)
17:30 – 18:00 Break
18:00 – 20:30 FEMS workshop
IMSF Focus group: Native MS
IMSF Focus group: Instrumentation



Parallel sessions 09:30 – 11:30

Environmental MS: Geo, Water, Aerosols, VOC's and POC's

Theme: Mass spectrometry across disciplines
Chair: Anneli Kruve

Presentations:

09:30 – 09:50	Keynote: TITLE TO BE ANNOUNCED	Frederic Béen <i>KWR Water Research Institute</i>
09:50 – 10:06	Oral: #22 Cheminformatics and High Resolution Mass Spectrometry in Historical Exposomics of the Minette Region	Dagny Aurich <i>University of Luxembourg</i>
10:06 – 10:22	Oral: #156 Polyethylenoxide in the aquatic environment – development and optimisation of a quantitative trace-analytical method and first occurrence data	Frances Pauelsen <i>JLU Gießen</i>
10:22 – 10:38	Oral: #196 Metaproteomics: a new tool in wastewater surveillance	Claudia Tugui <i>Delft University of Technology</i>

10:38 – 10:54	Oral: #704 Screening of transformation products and intermediates of emerging contaminants from simulated aerobic degradation tests coupled with HPLC-MSⁿ	Federico Ivanic <i>Institute of Environmental Research and Engineering, UNSAM-CONICET</i>
10:54 – 11:10	Oral: #357 The Identification of Thyroid Hormone System Disrupting Compounds in Human Cord Blood Samples using Effect-Directed Analysis	Jeroen Meijer <i>Vrije Universiteit Amsterdam</i>
11:10 – 11:30	Panel discussion with speakers	

Parallel sessions 09:30 – 11:30

Nico Nibbering session on Ion Chemistry

Theme: Instrumentation and methods
Chair: Michael Gross

Presentations:

09:30 – 09:50	Keynote: #100 Reaction Acceleration in Microdroplets: Scope and Mechanisms	Graham Cooks <i>Purdue University</i>
09:50 – 10:06	Oral: #5 The First Mass Analyzer in the Netherlands	Albert Heck <i>Utrecht University</i>
10:06 – 10:22	Oral: #94 Excited state N-atoms in transform aromatic hydrocarbons into N heterocycles in a low-temperature plasma	Renato Zenobi <i>ETH Zürich</i>
10:22 – 10:38	Oral: #113 Synthesizing New Molecules in the Condensed Phase Using Gaseous Molecular Fragment Ions	Jonas Warneke <i>Leipzig University</i>
10:38 – 10:54	Oral: #228 Cyclic peptide protomers detection in the gas phase: impact on CCS measurement and fragmentation patterns	Edwin De Pauw <i>University of Liege</i>
10:54 – 11:10	Oral: #164 Unravelling the peptides' aggregation mechanism: The challenge of IM-MS instrumentation to probe heterogeneous and fragile processes	Agathe Depraz Depland <i>Vrije Universiteit</i>
11:10 – 11:30	Panel discussion with speakers	

Parallel sessions 09:30 – 11:30

High Resolution MS - Session A

Theme: Instrumentation and methods
Chair: Yury Tsybin

Presentations:

09:30 – 09:50	Keynote: #571 Towards spatial and cell resolved omics using advanced FTMs approaches	Ljiljana Pasa-Tolic <i>PNNL</i>
09:50 – 10:06	Oral: #498 High-accuracy MS of exotic atomic nuclei by phase-imaging ion-cyclotron-resonance and multi-reflection time-of-flight MS at SHIPTAP and ISOLTRAP	Lutz Schweikhard <i>University of Greifswald</i>

10:06 – 10:22	Oral: #690 Insights into surprisingly boring lives of high-mass ions by chasing single particles using segmented Fourier Transform	Tobias P. Wörner <i>Thermo Fisher Scientific</i>
10:22 – 10:38	Oral: #601 Application of OCULAR approach on 15 T solariX XR for bitumen analysis	Benedict Gannon <i>University of Warwick</i>
10:38 – 10:54	Oral: #660 Analysis of supercomplex mixtures by multi-step Liquid Chromatography and online High-Resolution Mass Spectrometry	Jens Dreschmann <i>Max-Planck-Institute for Kohlenforschung</i>
10:54 – 11:10	Oral: #688 Super-resolutive genetic algorithm for improved FT-ICR MS resolution	Marc Haegelin <i>CNRS</i>
11:10 – 11:30	Panel discussion with speakers	

Parallel sessions 09:30 – 11:30

Translational MS – Clinical and Liquid Biopsies

Theme: Life Sciences & Health
Chair: Leon Reubsaet & Maarten Altelaar

Presentations:

09:30 – 09:50	Keynote: #795 Two Sides of Precision Medicine: Health Surveillance	Jennifer van Eyk <i>Cedar Sinai Medical Center</i>
09:50 – 10:06	Oral: #13 In situ tissue pathology from spatially encoded mass spectrometry classifiers visualized in real time through augmented reality	Arash Zarrine-Afsar <i>University of Toronto</i>
10:06 – 10:22	Oral: #166 Automation of the filter-aided sample preparation (FASP) protocol using the robotic platform biomek i7 with focus on plasma samples preparation	Dana Hein <i>University Medical Center Mainz</i>
10:22 – 10:38	Oral: #400 Proteoform-reaction-monitoring (PFRM) and the discovery of biomarker candidates in liver transplanted recipients	Rafael Melani <i>Northwestern University</i>
10:38 – 10:54	Oral: #716 LC-MS analyses of purified circulating plasma exosomes from patients infected with Mycobacterium tuberculosis revealed disease state-dependent protein and lipid profiles	Stefan Kalkhof <i>Fraunhofer IZI Leipzig</i>
10:54 – 11:10	Oral: #728 A Metaproteomics Bioinformatics Workflow to study host -microbe dynamics in clinical samples	Pratik Jagtap <i>University of Minnesota</i>
11:10 – 11:30	Panel discussion with speakers	

Parallel sessions 09:30 – 11:30

MS in Structural Biology - Crosslinking MS

Theme: Life Sciences & Health
Chair: Tara Pukala & Fabio Gozo

Presentations:

09:30 – 09:50	Keynote: TITLE TO BE ANNOUNCED	Juri Rappsilber <i>TU Berlin</i>
09:50 – 10:06	Oral: #15 Combining cross-linking mass spectrometry and complexome profiling facilitates the selective analysis of protein complexes	Johannes Hevler <i>Utrecht University</i>
10:06 – 10:22	Oral: #42 Structural mass spectrometry approaches to decipher interactions within the ~380 kDa RUVBL1/RUVBL2/DPCD complex	Sarah Cianferani <i>CNRS</i>
10:22 – 10:38	Oral: #192 Fast FluoroAlkylation of Proteins (FFAP): A Novel Cross-linking Strategy for Aromatic Amino Acids	Zdenek Kukacka <i>The Czech Academy of Sciences</i>
10:38 – 10:54	Oral: #252 A new trifunctional cross-linker facilitating the mapping of membrane proteins for in vivo proteome-wide studies	Lucienne Nouchikian <i>Mass Spectrometry for Biology Institut Pasteur</i>
10:54 – 11:10	Oral: #395 Survival strategies in the deep - structural dynamics of a hyperthermophilic PEP-synthase	Pascal Albanese <i>Utrecht University</i>
11:10 – 11:30	Panel discussion with speakers	



Parallel sessions 15:30 – 17:30

Alternative Dissociation Methods

Theme: Instrumentation and methods

Chair: Vicki Wysocki

Presentations:

15:30 – 15:50	Keynote: #20 Mass spectrometry based photodissociation strategies for illuminating the ‘hidden’ diversity and structural complexity of the lipidome	Gavin Reid <i>University of Melbourne</i>
15:50 – 16:06	Oral: #44 The exclusive ion activation arsenal of the Omnitrap platform illustrated – applications in top down and bottom up proteomics	Dimitrios Papanastasiou <i>Fasmatech Science & Technology</i>
16:06 – 16:22	Oral: #45 Electron-induced and electron-capture dissociation in data-dependent acquisition mode performed on the Omnitrap platform coupled to an Orbitrap mass spectrometer	Mariangela Kosmopoulou <i>Fasmatech SA</i>
16:22 – 16:38	Oral: #66 Coupling ECD with IMS on a waters quadrupole-IMS-TOF mass spectrometer	Marcus Macht <i>MS Vision</i>
16:38 – 16:54	Oral: #240 Electron capture dissociation on a cyclic ion mobility enabled Q-ToF mass spectrometer provides higher structural resolution in HDX-MS experiments	Owen Cornwell <i>Waters</i>
16:54 – 17:10	Oral: #398 Electron Induced Fragmentation of Adduct Ions and Collision Induced Fragmentation of Radical Cations for Structural Elucidation of Metabolites by LC-MS/MS	G�rard Hopfgartner <i>University of Geneva</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

Data sciences in MS/AI/Chemometrics/identification/modelling - Session A

Theme: Instrumentation and methods

Chair: Benjamin Balluff

Presentations:

15:30 – 15:50	Keynote: #774 Empowering large chemical knowledge bases for exposomics: pubchemlite meets metfrag	Emma Schymanski <i>University of Luxembourg</i>
15:50 – 16:06	Oral: #687 Development of diagnostic tests for COVID-19 using MALDI(+) FR-ICR MS combined with machine learning	Wanderson Rom�o <i>Federal Institute of Esp�rito Santo</i>
16:06 – 16:22	Oral: #144 Relational Graph Convolutional Network for Robust Mass Spectrum Classification	Rapha�l La Rocca <i>Universit� de Li�ge</i>
16:22 – 16:38	Oral: #259 Universal Fragmentation Model for Tandem Mass Spectrometry Based Molecular Structure Elucidation	Bela Paizs <i>The Rosalind Franklin Institute</i>

16:38 – 16:54	Oral: #124 MSclassifR: an R package for supervised classification of mass spectra with machine learning methods	Alexandre Godmer <i>Sorbonne université</i>
16:54 – 17:10	Oral: #53 Modular antibody de novo sequence analysis using multi-tier proteomics data	Sebastiaan de Graaf <i>Utrecht University</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

Lipidomics

Theme: Life Sciences & Health
Chair: Erin Baker & Anne Kathrin Bendt

Presentations:

15:30 – 15:50	Keynote: #765 Lipid imaging using nanospray desorption electrospray ionization (nano-desi) mass spectrometry	Julia Laskin <i>Purdue University</i>
15:50 – 16:06	Oral: #221 Dysregulation of blood lipidome in various types of cancer: the way towards early cancer screening by UHPSFC/MS	Michal Holčapek <i>University of Pardubice</i>
16:06 – 16:22	Oral: #246 Characterisation of cardiolipins in mitochondria of HeLa cells by HPLC-MS/MS	Vera Schwantes <i>University of Münster</i>
16:22 – 16:38	Oral: #309 MS-based targeted profiling of oxylipins to understand the evolution and severity of COVID-19	Denise Biagini <i>University of Pisa</i>
16:38 – 16:54	Oral: #338 Characterizing Content and Localization of Complex Ganglioside Phenotypes in a GBA Model of Parkinson's Disease by Orthogonal High Resolution Ion Mobility Mass Spectrometry and Mass Spectrometry Imaging	Kim Ekroos <i>Lipidomics Consulting Ltd.</i>
16:54 – 17:10	Oral: #638 Cerebral organoids model system for neurological diseases	Zdenek Spacil <i>Masaryk University</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

Single cell MS and in cell MS

Theme: Life Sciences & Health
Chair: Kristin Burnum-Johnson

Presentations:

15:30 – 15:50	Keynote: #792 Exploring functional protein covariation across single cells	Nikolai Slavov <i>Northeastern University</i>
15:50 – 16:06	Oral: #563 Single Cell Quantitative Proteomics	David Goodlett <i>University of Victoria</i>

16:06 – 16:22	Oral: #172 Mass spectrometry imaging and profiling of single cells: application in breast cancer research	Eva Cuypers <i>M4i - University Maastricht</i>
16:22 – 16:38	Oral: #200 Analyzing single cell metabolomic flux in tissue	Gangqi Wang <i>Leiden University Medical Center</i>
16:38 – 16:54	Oral: #170 Single-cell MALDI mass spectrometry imaging enables an in-depth view of molecular heterogeneity in cell cultures	Jan Schwenzfeier <i>Institute of Hygiene</i>
16:54 – 17:10	Oral: #479 Single cell multimodal imaging for evaluation of cellular metabolism in human focal epilepsy	Isabeau Vermeulen <i>M4i - University Maastricht</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

Toxicology and Metabolism

Theme: Food and (Bio)Pharma
Chair: Adrian Covaci & Jeroen Kool

Presentations:

15:30 – 15:50	Keynote: #421 Mass spectrometry in venom chemistry	Manjunatha Kini <i>National University of Singapore</i>
15:50 – 16:06	Oral: #377 Molecular Networking Approach with MetWork webserver for drug annotation : Building an artificial intelligence in silico database of all commercialized drugs in France as an innovative and ideal addition for clinical toxicology	Emmanuel Bourgoigne <i>APHP</i>
16:06 – 16:22	Oral: #232 Hyphenation of Electrochemistry and Mass Spectrometry for the Simulation of Metabolic Processes and the Generation of Stable Isotope Labelled Metabolite Standards	Valentin Göldner <i>University of Münster</i>
16:22 – 16:38	Oral: #634 A “chemical toolbox” for the generation of metabolite-like products of new psychoactive substances	Peng Che <i>Vrije Universiteit Amsterdam</i>
16:38 – 16:54	Oral: #535 Multiomics Pipeline Reveals Alpha-Ketoglutarate as a Countermeasure for VX Organophosphate Poisoning	Phillip Mach <i>LANL</i>
16:54 – 17:10	Oral: #447 Compound Degradation studies for a wide range of molecule sizes and HRMS data source	Ismael Zamora <i>Lead Molecular Design</i>
17:10 – 17:30	Panel discussion with speakers	



Tuesday 30 August 2022

- 08:30 – 10:00 2020 Thomson Award ceremony and lectures
- 10:00 – 11:00 Coffee break
- 11:00 – 13:00 Parallel sessions (morning)
- 13:00 – 14:00 Lunch break & Vendor shows
- 14:00 – 15:30 Poster sessions (A) & coffee break
- 15:30 – 17:30 Parallel sessions (afternoon)
- 17:30 – 18:00 Break
- 18:00 – 20:30 IMSF Focus group: Imaging MS
IMSF Focus group: Forensics



Parallel sessions 11:00 – 13:00

Young MS Scientists - Session A

Theme: Young MS Scientists
Chair: Guinevere Lageveen-Kammeijer & Karli Reiding

Presentations:

15:30 – 15:50	Keynote: #694 Building a Multimodal Molecular Atlas of the Human Kidney	Elisabeth Neumann <i>Vanderbilt University</i>
15:50 – 16:06	Oral: #546 MALDI Imaging Mass Spectrometry Evaluation of Glycans and Extracellular Matrix Proteins as Biomarkers of Renal Cell Carcinoma Immunotherapy Response	Colin McDowell <i>Medical University of South Carolina</i>
16:06 – 16:22	Oral: #538 Development and optimization of on-tissue digestion protocols as a tool to increase the number and sequence coverage of tissue proteins	Julia Kulpa <i>M4I, Institute Maastricht University</i>
16:22 – 16:38	Oral: #540 The characterisation of charge location resolved precursor ions using ion mobility tandem mass spectrometry	Anirudh Sharma <i>Teesside University</i>
16:38 – 16:54	Oral: #606 Capillary electrophoresis coupled to TIMS-TOF mass spectrometry using the nanoceasy interface	Jasmin Schairer <i>Aalen University</i>
16:54 – 17:10	Oral: #469 Yield improvement in secondary ion mass spectrometry using chemically reactive gas cluster ion beams	Matija Lagator <i>The University of Manchester</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

Ion Spectroscopy, Physical and Chemical principles underlying MS - Session B

Theme: Instrumentation and methods

Chair: Isabelle Compagnon

Presentations:

11:00 – 11:16	Oral: #691 Lightfootprinting proteins	Perdita Barran <i>The University of Manchester</i>
11:16 – 11:32	Oral: #733 Changing the Temperature During Resonant Excitation in Commercial Quadrupole Ion Traps	Thomas Neugebauer <i>Bruker Daltonics</i>
11:32 – 11:48	Oral: #345 Native MS for interactions and gas-phase chemistry of metalloptides and metalloproteins	Sarah Brandner <i>Technische Universität Darmstadt</i>
11:48 – 12:04	Oral: #473 Cryogenic Infrared Ion Spectroscopy of Isomeric Lipids	Carla Kirschbaum <i>Freie Universität Berlin</i>
12:04 – 12:20	Oral: #523 Conformation-selective infrared ion spectroscopy on a TIMS enabled FT-ICR MS platform	Kas Houthuijs <i>Radboud University Nijmegen</i>
12:20 – 12:36	Oral: #86 The Gas-Phase Host-Guest Chemistry of [n]Cycloparaphenylenes	Markus Freiberger <i>Friedrich-Alexander-University Erlangen-Nürnberg</i>
12:36 – 13:00	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

Data sciences in MS/AI/Chemometrics/identification/modelling - Session B

Theme: Instrumentation and methods

Chair: Magnus Palmblad

Presentations:

11:00 – 11:16	Oral: #445 Detection strategies for conjugate metabolites with tandem mass spectrometry data in human biomonitoring and wastewater-based epidemiology	Carolin Huber <i>Helmholtz Center for Environmental Research - UFZ</i>
11:16 – 11:32	Oral: #495 Can we predict the preference for adduct formation in electrospray?	Stepan Stepanovic <i>University of Geneva</i>
11:32 – 11:48	Oral: #130 Naive Bayes classification model for isotopologue detection in LC-HRMS data	Denice van Herwerden <i>University of Amsterdam</i>
11:48 – 12:04	Oral: #391 M2aia extension for accessible annotation creation and annotation transfer for mass spectrometry imaging in multi-modal setups	Jonas Cordes <i>Hochschule Mannheim University of Applied Sciences</i>

12:04 – 12:20	Oral: #93 Workflow based on TIC alignment for retrospective analysis of low-resolution on-line SPE-GC-MS data	Nienke Meekel <i>KWR Water Research Institute</i>
12:20 – 12:36	Oral: #379 Deconvolution-free feature extraction and annotation via time-domain transient modelling in orbitrap FTMS for biopharma applications	Yury Tsybin <i>Spectroswiss</i>
12:36 – 13:00	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

Glycomics & Glycoproteomics - Session A

Theme: Life Sciences & Health
Chair: Katalin F. Medzihradszky & Kay-Hooi Khoo

Presentations:

11:00 – 11:20	Keynote: #786 Negotiating the Maze of O-glycosylation	Zsuzsanna Darula <i>Hungarian Centre of Excellence for Molecular Medicine</i>
11:20 – 11:36	Oral: #117 Determination of O-acetyl positions on sialic acids with ion mobility-mass spectrometry	Kevin Hooijschuur <i>Utrecht University</i>
11:36 – 11:52	Oral: #485 Mucins O-glycomics by high resolution ion mobility-mass spectrometry	Leila Bechtella <i>Freie Universität Berlin</i>
11:52 – 12:08	Oral: #559 Antibody Array Based N-glycan Imaging of Captured Immune Cells	James Dressman <i>Medical University of South Carolina</i>
12:08 – 12:24	Oral: #630 Establishing structural MS to understand protein glycosylation in neurological function and disease	Melissa Bärenfänger <i>VU Amsterdam</i>
12:24 – 12:40	Oral: #722 Deciphering sialic acid pathway regulation via novel in-depth multi-omics approach in tissue-specific human models	Merel Post <i>Radboud University Medical Center</i>
12:40 – 13:00	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

Biopharmaceuticals & Vaccines

Theme: Food and (Bio)Pharma
Chair: Eef Dirksen & Koen Sandra

Presentations:

11:00 – 11:20	Keynote: #816 Fast and automated characterization of monoclonal antibody minor variants from cell cultures by combined Protein-A and multi-dimensional LC/MS methodologies	Cinzia Stella <i>Genentech</i>
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11:20 – 11:36	Oral: #84 Mass spectrometry as a key technique for the characterization of bispecific monoclonal antibodies	Bastiaan Duivelshof <i>University of Geneva</i>
11:36 – 11:52	Oral: #185 Expanding functional antibody characterization to proteoforms: affinity CE-MS for antibody – FcRs binding assessment	Elena Dominguez Vega <i>Leiden University Medical Center</i>
11:52 – 12:08	Oral: #188 Top-down mass spectrometry: a very promising tool to follow biopharmaceuticals and their biotransformation products in plasma	Jonathan Dhenin <i>Sanofi-Aventis</i>
12:08 – 12:24	Oral: #552 Middle-Down Analysis of Non-Covalent Interactions in Multispecific Antibodies	Michael Poltash <i>Janssen Pharmaceuticals</i>
12:24 – 12:40	Oral: #522 Characterisation of oligonucleotides by tandem MS and IMS in negative ion ESI	Fabien Hannauer <i>University of Southampton</i>
12:40 – 13:00	Panel discussion with speakers	



Parallel sessions 15:30 – 17:30

Forensic Sciences

Theme: Mass spectrometry across disciplines
Chair: Isabelle Kohler

Presentations:

15:30 – 15:50	Keynote: #7 Mass spectrometry in sports drug testing – advances and challenges	Mario Thevis <i>German Sport University Cologne</i>
15:50 – 16:06	Oral: #62 Steroid profiling in blood as an efficient approach in doping control analyses	Tobias Langer <i>Swiss Laboratory for Doping Analyses</i>
16:06 – 16:22	Oral: #212 Elucidation of chlorinated tyrosine adducts in blood plasma as selective biomarkers of chlorine exposure	Mirjam Bruin-Hoegée <i>University of Amsterdam</i>
16:22 – 16:38	Oral: #285 Trapped ion mobility mass spectrometry for the rapid separation and identification of positional isomers in designer-drug mixtures	Hany Majeed <i>Vrije Universiteit Amsterdam</i>
16:38 – 16:54	Oral: #544 Untargeted mass spectrometry methods for the profiling of Ricinus communis and abrus precatorius seed extracts – a forensic approach	Lisa Scharrenbroch <i>Bundeskriminalamt</i>
16:54 – 17:10	Oral: #14 Validation of a LC-ESI/MS/MS method for simultaneous measurement of eighteen cannabinoids in plant materials of hemp	Liguo Song <i>Western Illinois University</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

Instrumentation development: Mass Analyzers

Theme: Instrumentation and methods

Chair: Alexander Makarov

Presentations:

15:30 – 15:50	Keynote: #425 Advances in ion optical design of multi-pass time-of-flight mass spectrometers	Mikhail Yavor <i>Institute for analytical instrumentation RAS</i>
15:50 – 16:06	Oral: #169 A high-performance quadrupole mass filter with novel operation principles	Emil Traykov <i>IPHC/CNRS</i>
16:06 – 16:22	Oral: #481 Combining Ultraviolet Photodissociation and 2-Dimensional Mass Spectrometry	Peter O'Connor <i>University of Warwick</i>
16:22 – 16:38	Oral: #28 A method for the structural analysis and time-resolved imaging of biomacromolecular assemblies in mass spectrometry using UV photodissociation and timepix detector	Anjusha Mathew <i>M4i Institute, Maastricht University</i>
16:38 – 16:54	Oral: #678 Probing the stability of the β-hairpin structure of GB1P in the gas phase of coupling mass spectrometry and fluorescence spectroscopy	Lukas Benzenberg <i>ETH Zürich</i>
16:54 – 17:10	Oral: #464 Single-particle mass analysis applied to antibody-antigen complexes, intact ribosomes and viruses using Orbitrap-based charge detection mass spectrometry	Szu-Hsueh Lai <i>Utrecht University</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

MS in Structural Biology - Native MS, HDX-MS -Session A

Theme: Life Sciences & Health

Chair: Charlotte Uetrecht

Presentations:

15:30 – 15:50	Keynote: #785 Native mass spectrometry under “close-to-life” conditions	Michal Sharon <i>Weizmann Institute</i>
15:50 – 16:06	Oral: #47 Unravelling the mechanism of rotavirus viral factory formation using structural mass spectrometry	Alice Colyer <i>University of Leeds</i>
16:06 – 16:22	Oral: #219 Native top-down electron capture dissociation mass spectrometry with isotope depletion for studying the early stages of oligomer formation in alpha-synuclein proteoforms	Kiani Jeacock <i>University of Edinburgh</i>
16:22 – 16:38	Oral: #241 Hydrogen-deuterium exchange native mass spectrometry of G-quadruplex DNA	Eric Largy <i>Université de Bordeaux</i>
16:38 – 16:54	Oral: #356 Unravelling the structural components behind algae’s highly efficient photosynthetic machines	Aneika Leney <i>University of Birmingham</i>

16:54 – 17:10	Oral: #131 Investigating the binding modes of a conformation-selective ligand to pharmaceutically relevant immunophilins using native IM-MS and CIU experiments	Silvana Smilla Zurmühl <i>Technische Universität Darmstadt</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

Separation & Hyphenation; chromatography, electrophoresis – Session B, proteins

Theme: Instrumentation and methods
Chair: Elena Dominguez

Presentations:

15:30 – 15:46	Oral: #405 High Throughput Venomics	Jeroen Kool <i>VU Amsterdam</i>
15:46 – 16:02	Oral: #266 From Downscaling to Single-Cell Proteomic: Understanding and minimizing the downscaling effect	Christopher Kune <i>Mass Spectrometry Laboratory - ULiège</i>
16:02 – 16:18	Oral: #370 Online native CEX-IM(CIU)-MS approaches to decipher the conformational landscape of therapeutic monoclonal antibodies charge variants	Guusje van Schaick <i>Leiden University Medical Center</i>
16:18 – 16:34	Oral: #258 Investigation of Metal-Protein-Interactions Using a Complementary Analysis Setup Comprising HPLC-ESI-TIMS-MS and HPLC-ICP-MS	Catharina Erbacher <i>University of Münster</i>
16:34 – 16:50	Oral: #365 Multi-nanoparticle Workflow Enables Deep Plasma Proteomics at Scale, with Enhanced Precision, and Depths of Coverage.	Shadi Ferdosi <i>Seer Inc</i>
16:50 – 17:06	Oral: #635 Comparison of hydrophilic interaction chromatography and native size-exclusion chromatography-mass spectrometry for the characterization of heavily glycosylated proteins	Ziran Zhai <i>University of Amsterdam</i>
17:06 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

Cellular Signaling Processes and MS in Systems Biology

Theme: Life Sciences & Health
Chair: Chiara Francavilla

Presentations:

15:30 – 15:50	Keynote: #801 Decrypting protein modifications and drug actions by chemical proteomics	Bernhard Kuster <i>TUM Lehrstuhl für Proteomik und Bioanalytik</i>
15:50 – 16:06	Oral: #723 A CDK-mediated phosphorylation switch of disordered protein condensation	Maarten Altelaar <i>Utrecht University</i>
16:06 – 16:22	Oral: #336 The endothelial inflammatory repertoire: a multi-omic delineation of distinct and synergetic endothelial inflammatory states	Stijn Groten <i>Sanquin Research</i>
16:22 – 16:38	Oral: #471 Intermittent fasting induces sexually dimorphic hepatic interferon alpha signaling	Dylan Harney <i>University of Sydney</i>
16:38 – 16:54	Oral: #210 Following FGF signaling dynamics in breast cancer using a targeted kinome assay	Tim Veth <i>Utrecht University</i>
16:54 – 17:10	Oral: #70 Spatially Resolved Phosphoproteomics Reveals Fibroblast Growth Factor Receptor Recycling-driven Regulation of Autophagy and Survival	Joanne Watson <i>University of Manchester</i>
17:10 – 17:30	Panel discussion with speakers	



Wednesday 31 August 2022

- 08:30 – 10:00 Curt Brunnée Award ceremony and lectures
Jochen Franzen Award ceremony and lecture
- 10:00 – 11:00 Coffee break
- 11:00 – 13:00 Parallel sessions (morning)
- 13:00 – 14:00 Lunch break & Vendor shows
- 14:00 – 15:30 Poster sessions (B) & coffee break
- 15:30 – 17:30 Parallel sessions (afternoon)
- 17:30 – 18:00 Break
- 18:00 – 20:30 Career workshop



Parallel sessions 11:00 – 13:00

Cultural Heritage and Conservation Science

Theme: Mass spectrometry across disciplines
Chair: Maarten van Bommel

Presentations:

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|---------------|--|--|
| 11:00 – 11:20 | Keynote: #746 Mass Spectrometry for the Research of Objects of Cultural Heritage | Klaas Jan van den Berg
<i>Rijksdienst Cultureel Erfgoed</i> |
| 11:20 – 11:36 | Oral: #58 Non-proximate sampling of intact native American baskets with in-line dopant permeation atmospheric pressure photoionization | G. Asher Newsome
<i>Smithsonian Museum Conservation Institute</i> |
| 11:36 – 11:52 | Oral: #268 Mapping historical pigments by MALDI-MS imaging | Alba Alvarez-Martin
<i>University of Antwerp</i> |
| 11:52 – 12:08 | Oral: #287 Study of collagen crosslinking and associated modifications in bones using proteomics | Catherine Gilbert
<i>Université de Bordeaux</i> |
| 12:08 – 12:24 | Oral: #612 Understanding the role of pigments in the siccative of oil-based paints by means of soft chemical depolymerization and ultra-high resolution mass spectrometry | Caterina Bordin
<i>CNRS - Université de Lille</i> |
| 12:24 – 12:40 | Oral: #659 Paleoproteomics by ultrahigh resolution MALDI FT-ICR for identification and dating bones from upper pleistocene | Fabrice Bray
<i>MSAP UAR 3290</i> |
| 12:40 – 13:00 | Panel discussion with speakers | |

Parallel sessions 11:00 – 13:00

Ionization technologies

Theme: Instrumentation and methods

Chair: Jens Soltwisch

Presentations:

11:00 – 11:20	Keynote: TITLE TO BE ANNOUNCED	Olga Ovchinnikova
11:20 – 11:36	Oral: #80 Hybrid Ionization Source Combining Nano-electrospray and Dielectric Barrier Discharge Ionization for Simultaneous Detection of Polar and Non-polar Compounds in Single Cells	Qinlei Liu <i>ETH Zürich</i>
11:36 – 11:52	Oral: #102 Increasing Molecular Coverage and Sensitivity for MALDI-MSI via Direct 2-Photon Ionisation of Analytes Enabled by MALDI-2 – Applications to Aromatic Antioxidants in Tissues and Cells	Tassiani Sarretto <i>UOW</i>
11:52 – 12:08	Oral: #316 Effects of biochemical buffers on protein thermal stability measured using submicron emitters and fast heating	Jacob S. Jordan <i>University of California, Berkeley</i>
12:08 – 12:24	Oral: #633 Hyphenation of gas chromatography to a dual ionization source TOFMS for improved compound identification	Steffen Bräkling <i>University Wuppertal</i>
12:24 – 12:40	Oral: #676 Rapid formation of highly oxygenated organic molecules (HOM) revealed with the multi-scheme chemical ionization (MION) inlet	Matti Rissanen <i>Tampere University</i>
12:40 – 13:00	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

Translational MS – Cancer and Immunology, and MS

Theme: Life Sciences & Health

Chair: Connie Jimenez & Peter van Veelen

Presentations:

11:00 – 11:20	Keynote: #789 Proteomic analysis of cancer internal heterogeneity	Tamar Geiger <i>Utrecht University</i>
11:20 – 11:36	Oral: #18 Sensitive and Quantitative Detection of MHC-I Displayed Neoepitopes Using a Semiautomated Workflow and TOMAHAQ Mass Spectrometry	Jennie Lill <i>Genentech</i>
11:36 – 11:52	Oral: #223 Personalized responses to viral infections revealed by monitoring serum IgG1 repertoires	Danique van Rijswijk <i>Utrecht University</i>
11:52 – 12:08	Oral: #510 Fibrioblast activation protein triggers selective release of drug payload from small molecule-drug conjugates in solid tumors	Ettore Gilardoni <i>Philochem</i>

12:08 – 12:24	Oral: #669 A new LC-MS/MS based method to quantify urinary thymine dimers after ultraviolet radiation of the skin	Catharina Lerche <i>Copenhagen University Hospital—Bispebjerg and Frederiksberg</i>
12:24 – 12:40	Oral: #712 Ubiquitin ligase STUB1 destabilizes IFNγ-receptor complex to suppress tumor signaling	Onno B. Bleijerveld <i>The Netherlands Cancer Institute</i>
12:40 – 13:00	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

Proteomics: Top down

Theme: Life Sciences & Health
Chair: Andrea Gargano & Ljiljana Pasa-Tolic

Presentations:

11:00 – 11:20	Keynote: #775 New frontiers in proteomics – proteoforms, proteoform families, and the human proteoform project	Lloyd Smith <i>University of Wisconsin - Madison</i>
11:20 – 11:36	Oral: #341 Characterization of bacterial toxin activity using Proton Transfer Reaction top-down mass spectrometry	Martial Rey <i>Institut Pasteur</i>
11:36 – 11:52	Oral: #272 Top-down identification of protein-protein and protein-ligand complexes using native ambient mass spectrometry directly from tissue	James Hughes <i>University of Birmingham</i>
11:52 – 12:08	Oral: #202 Conformation-specific top-down mass spectrometry	Hannah Britt <i>University College London</i>
12:08 – 12:24	Oral: #92 Benefits of native top-down ECD fragmentation for the sequencing of diverse immunoglobulin formats	Kelly Gallagher <i>Utrecht University</i>
12:24 – 12:40	Oral: #120 Two-dimensional Mass Spectrometry and Top-Down Proteomics: Post-translational Modifications and Protein Conformations	Maria van Agthoven <i>BIOCEV</i>
12:40 – 13:00	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

Imaging MS - applications in Life Science & Health - Session A

Theme: Life Sciences & Health
Chair: Peggy Angel

Presentations:

11:00 – 11:20	Keynote: #797 Toward in vivo intraoperative mass spectrometry imaging	Isabelle Fournier <i>University of Lille</i>
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11:20 – 11:36	Oral: #231 N-glycosylation and its role in the malignant transformation of adenoma to early-stage colorectal cancer	Bram Heijs <i>Leiden University Medical Center</i>
11:36 – 11:52	Oral: #371 Unravelling Amyloid Beta Plaque Pathology Associated Lipid Dynamics in Various Alzheimer's Disease Mouse Models	Junyue Ge <i>University of Gothenburg</i>
11:52 – 12:08	Oral: #609 Orbitrap-sims imaging reveals cell-type specific localization of tomato secondary metabolites and allows putative metabolite annotation	Uwe Heinig <i>Weizmann Institute of Science</i>
12:08 – 12:24	Oral: #460 Isomer-resolved lipid imaging of breast cancer using high-pressure ozone-induced dissociation mass spectrometry imaging	Britt Claes <i>Institute University of Maastricht</i>
12:24 – 12:40	Oral: #735 AP-SMALDI Imaging of Compounds and Metabolites in Parasites and Infected Hosts	Bernhard Spengler <i>Justus Liebig University</i>
12:40 – 13:00	Panel discussion with speakers	



Parallel sessions 15:30 – 17:30

MS in the Netherlands (NVMS session)

Chair: Manfred Wuhrer & Ivana Bobeldijk

Presentations:

→ Program to be announced later!

Parallel sessions 15:30 – 17:30

Imaging MS - Instrumentation and Methods

Theme: Instrumentation and methods

Chair: Shane Ellis

Presentations:

15:30 – 15:50	Keynote: TITLE TO BE ANNOUNCED	Jeff Spraggings <i>Vanderbilt University</i>
15:50 – 16:06	Oral: #176 MALDI MSI and M²AIA enable molecular 3D reconstructions of spheroids	Stefania Alexandra Iakab <i>Hochschule Mannheim</i>

16:06 – 16:22	Oral: #695 Transmission-mode MALDI-2 on a Trapped Ion Mobility Quadrupole Time-of-flight Instrument for Sub-cellular Resolution MS Imaging at High Data Acquisition Speeds	Alexander Potthoff <i>University of Münster</i>
16:22 – 16:38	Oral: #567 Overcoming the Resolution Gap: Incorporating MALDI-IMS Data into Single Cell Phenotyping by Imaging Mass Cytometry	Jake Griner <i>Medical University of South Carolina</i>
16:38 – 16:54	Oral: #406 Kineticmsi, an R-based framework for relative quantification of spatial isotopic incorporation	Berin Boughton <i>Murdoch University</i>
16:54 – 17:10	Oral: #145 Mass spectrometry imaging at 500,000 pixels per second	Ian Anthony <i>Maastricht University</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

Proteomics: Quantification

Theme: Life Sciences & Health
Chair: Garry Corthals & Kathryn Lilley

Presentations:

15:30 – 15:50	Keynote: #788 MS redox-proteomics for global analysis of oxidative response	Sara Zanivan <i>CRUK Beatson Institute</i>
15:50 – 16:06	Oral: #141 Detecting and quantifying translational errors by data-independent acquisition	Jonas Pöhls <i>Max-Planck-Institute of Molecular Cell Biology and Genetics</i>
16:06 – 16:22	Oral: #374 Identifying novel transcriptional regulators using affinity purifications coupled to quantitative mass spectrometry	Cathrin Graewe <i>Radboud University</i>
16:22 – 16:38	Oral: #583 Proteome wide, real-time spectral library matching to improve sensitivity and efficiency of quantitative proteomics workflows	Chris McGann <i>University of Washington</i>
16:38 – 16:54	Oral: #643 LC-MS platform for high-throughput quantitative proteomics of wheat grain in large breeding programs	Malte Sielaff <i>University Medical Center of the Johannes Gutenberg-University Mainz</i>
16:54 – 17:10	Oral: #717 Proteomics profiling of saliva for identification of novel biomarker in adenomatous polyp and colorectal cancer patients vs. healthy controls	Sama Rezasoltani <i>University Medical Center Hamburg-Eppendorf</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

Polymers and Synthetic Molecules

Theme: Biomaterials
Chair: Harry Philipssen

Presentations:

15:30 – 15:50	Keynote: # 784 Elucidation of Tadpole and Comb Polymer Architectures by Tandem Mass Spectrometry and Ion Mobility Techniques	Chrys Wesdemiotis <i>The University of Akron</i>
15:50 – 16:06	Oral: #802 Water Oxidation on Free Calcium-Manganese-Oxide Clusters: Gas Phase Model Systems for the Catalytically Active Center of Photosystem II	Sandra Lang <i>Ulm University</i>
16:06 – 16:22	Oral: #762 Cell instructive materials for next generation medical devices: what's mass spectrometry got to do with it?	Morgan Alexander <i>University of Nottingham</i>
16:22 – 16:38	Oral: #798 Correlative approaches based on mass spectrometry for semiconductor applications	Jean-Paul Barnes <i>CEA-Leti</i>
16:38 – 16:54	Oral: #782 Biomedical accelerator mass spectrometry	Esther van Duijn <i>TNO</i>
16:54 – 17:10	Oral: #114 Sequence determination of copolymers by mass spectrometry after pyrolysis-gas chromatography	Wouter Knol <i>University of Amsterdam</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

Glycomics & Glycoproteomics - Session B

Theme: Life Sciences & Health
Chair: Melissa Bärenfänger

Presentations:

15:30 – 15:46	Oral: #108 Exact structure determination of isomeric glycans by ion mobility-mass spectrometry	Javier Sastre Toraño <i>Utrecht University</i>
15:46 – 16:02	Oral: #591 CCS-enabled timstof pro workflow for in vitro human liver microsome drug metabolites profiling and characterization	Catherine Costello <i>Boston University School of Medicine</i>
16:02 – 16:18	Oral: #520 Towards real-time glycopeptide identification on the timstof pro - paser platform: virtual precursor enabled peptide-moiety identification	Gad Armony <i>Radboud University Medical Center</i>
16:18 – 16:34	Oral: #251 Structural characterization of antigen-like oligosaccharide structures by gas phase infrared spectroscopy	Baptiste Moge <i>ilm</i>

16:34 – 16:50	Oral: #417 Development and application of ion mobility tandem mass spectrometry for the investigation of human cerebrospinal fluid gangliosidome	Mirela Sarbu <i>National Institute for Research and Development in Electrochemistry and Condensed Matter</i>
16:50 – 17:06	Oral: #160 The use of mass spectrometry and glycogenomics for the dissection of the human O-glycome	Noortje de Haan <i>University of Copenhagen</i>
17:06 – 17:30	Panel discussion with speakers	



Thursday 1 September 2022

08:30 – 10:00	2022 Thomson Awards ceremony and lectures
10:00 – 11:00	Coffee break
11:00 – 13:00	Parallel sessions (morning)
13:00 – 14:00	Lunch break & Vendor shows
14:00 – 15:30	Poster sessions (B) & coffee break
15:30 – 17:30	Parallel sessions (afternoon)
17:30 – 18:00	Break
18:00 – 21:30	Conference party/dinner



Parallel sessions 11:00 – 13:00

Ion Spectroscopy, Physical and Chemical principles underlying MS - Session A

Theme: Instrumentation and methods
Chair: Anouk Rijs

Presentations:

11:00 – 11:20	Keynote: #224 Electronic circular dichroism ion spectroscopy	Valérie Gabelica <i>INSERM, CNRS & Université de Bordeaux</i>
11:20 – 11:36	Oral: #450 Optimization of ionic liquid clusters ionization by experimental design and interaction strength comparison using ESI-MS/MS	Alexis Dubuis <i>L'Oréal Research & Innovation</i>
11:36 – 11:52	Oral: #65 Combining native ion-mobility-mass spectrometry and fluorescence spectroscopy for structural characterization of biomolecules in the gas phase	Ri Wu <i>ETH Zürich</i>
11:52 – 12:08	Oral: #194 Investigation of peptoid ions secondary structures by ion mobility mass spectrometry – mass spectrometry	Perrine Weber <i>UMONS</i>
12:08 – 12:24	Oral: #581 Gas-phase intramolecular proton transfer catalysis of para-aminobenzoic acid	Boris Ucur <i>University of Wollongong,</i>
12:24 – 12:40	Oral: #770 Mass Spectrometry Based Footprinting for Membrane Proteins	Michael Gross <i>Washington University in St Louis</i>
12:40 – 13:00	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

Separation & Hyphenation; Chromatography, Electrophoresis - Small Molecules

Theme: Instrumentation and methods

Chair: John Langley

Presentations:

11:00 – 11:20	Keynote: #793 Multi-dimensional liquid chromatography techniques for the analysis of organic micropollutants in environmental samples	Deirdre Cabooter <i>KU Leuven</i>
11:20 – 11:36	Oral: #283 Separation of isomer and isobar compounds from complex halogenated pop mixtures by GC-TIMS-MS	Hugo Muller <i>University of Liège</i>
11:36 – 11:52	Oral: #658 Acetylation in combination with gas chromatography coupled to ultrahigh resolution mass spectrometry for the determination of functional groups in complex mixtures	Diana Catalina Palacio Lozano <i>University of Warwick</i>
11:52 – 12:08	Oral: #686 Advances in the ion mobility spectrometry strategies to go beyond separation	Darya Hadavi <i>M4I Institute</i>
12:08 – 12:24	Oral: #618 Characterization of the nanoceasy CE-MS interface: analytical properties and flow rates of the nanoflow sheath liquid coupling	Jasmin Schairer <i>Aalen University</i>
12:24 – 12:40	Oral: #529 3D-printed open port probe-electrospray interface for high-throughput flow injection or liquid chromatography analysis	Xiaobo Tian <i>University of Geneva</i>
12:40 – 13:00	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

Metabolomics - Session A

Theme: Life Sciences & Health

Chair: Norberto Lopez & Thomas Hankemeier

Presentations:

11:00 – 11:20	Keynote: #796 High resolution tailored metabolomics in the food-nutrition-health chemical continuum	Philippe Schmitt-Kopplin <i>Helmholtz Munich</i>
11:20 – 11:36	Oral: #362 Infection metallomics – based differentiation of aspergillus fumigatus colonization and invasion	Rutuja H. Patil <i>Institute of Microbiology CAS AV CR</i>
11:36 – 11:52	Oral: #472 The unexplored world of non-canonical fatty acids	Jan Philipp Menzel <i>Queensland University of Technology</i>
11:52 – 12:08	Oral: #575 Method development and troubleshooting of metabolomic MALDI imaging reveals sample preparation dependent tissue specificities	Marlene Leibetseder <i>Technische Universität Wien</i>

12:08 – 12:24	Oral: #410 Building multidimensional in-house metabolomics libraries for untargeted metabolomics with open-source tools	Katyeny Manuela da Silva <i>University of Antwerp</i>
12:24 – 12:40	Oral: #599 Non-invasive monitoring of short-chain fatty acids in exhaled breath using proton transfer reaction – time-of-flight – mass spectrometry	Joris Meurs <i>Radboud University</i>
12:40 – 13:00	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

Cross-omics, Data Integration and Bioinformatics for MS

Theme: Life Sciences & Health
Chair: Justin van der Hooft & Alain van Gool

Presentations:

11:00 – 11:20	Keynote: TITLE TO BE ANNOUNCED	Chanchal Kumar <i>Grünenthal</i>
11:20 – 11:36	Oral: #107 A Cloud-scalable Software Suite for Large-Scale Proteogenomics Data Analysis and Visualization.	Margaret Donovan <i>Seer</i>
11:36 – 11:52	Oral: #369 Experimental reproducibility limits the correlation between mRNA and protein abundances in tumour profiles	Swathi Ramachandra Upadhya <i>University College Dublin</i>
11:52 – 12:08	Oral: #443 Revealing the molecular universe of the human kidney with MALDI-MSI: from spatial metabolomics to spatial glycomics	Christopher Anderton <i>Pacific Northwest National Laboratory</i>
12:08 – 12:24	Oral: #573 Multi-omics investigation of amino acid dynamics in autophagy	Kathrin Thedieck <i>University of Groningen, Carl von Ossietzky University Oldenburg</i>
12:24 – 12:40	Oral: #631 Simultaneous proteo-metabolomics reveals metabolic shifts in an vitro model of tuberous sclerosis complex (TSC)	Alienke van Pijkeren <i>University of Innsbruck</i>
12:40 – 13:00	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

Biosimilars, Biobetters & Glycoengineering

Theme: Food and (Bio)Pharma
Chair: David Falck & Wendy Sandoval

Presentations:

11:00 – 11:20	Keynote: #811 Characterization and monitoring of bispecific antibody variants by native mass spectrometry	Markus Habeger <i>Roche Diagnostics GmbH</i>
11:20 – 11:36	Oral: #111 Disclosing the quantitative potential of middle-up HILIC-MS for the N-glycan profiling of therapeutic monoclonal antibodies	Valentina D'Atri <i>Université de Genève</i>
11:36 – 11:52	Oral: #253 Mass Spectrometry-Based De Novo Sequencing of Antibodies Using Multiple Proteases and a Dual Fragmentation Scheme	Joost Snijder <i>Utrecht University</i>
11:52 – 12:08	Oral: #677 At-line monitoring and quantification of monoclonal antibody products during bioprocesses using HPLC-MS	Katharina Böttinger <i>Paris Lodron University of Salzburg</i>
12:08 – 12:24	Oral: #109 Standardized Graphitic Carbon Chromatography Hyphenated to Tandem MS/MS used for Isomer Specific N-Glycomics	Johannes Helm <i>University of Natural Resources and Life Sciences, Vienna</i>
12:24 – 12:40	Oral: #492 Structural characterization of antibody-drug conjugates using hydrogen/deuterium exchange and limited proteolysis-mass spectrometry	Liana Tsiatsiani <i>Byondis B.V.</i>
12:40 – 13:00	Panel discussion with speakers	



Parallel sessions 15:30 – 17:30

Homeland Security, Explosives and Environmental Monitoring

Theme: Mass spectrometry across disciplines
Chair: Jimmie Oxley

Presentations:

15:30 – 15:50	Keynote: #701 Determination of per- and polyfluoroalkyl substances (PFAS) and polyfluoroalkyl phosphate esters (PAPs) in food packaging materials by LC-MS	Jacob de Boer <i>Vrije Universiteit Amsterdam</i>
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15:50 – 16:06	Oral: #129 Toxicity predictions of unidentified chemicals in water by nontarget LC/HRMS	Pilleriin Peets <i>Stockholm University</i>
16:06 – 16:22	Oral: #604 Two-dimensional ultraviolet photodissociation mass spectrometry for the data-independent analysis of singly-charged agrochemicals and their metabolites in environmentally related matrices	Bryan Marzullo <i>University of Warwick</i>
16:22 – 16:38	Oral: #621 Does sea-dumped chemical weapons pose a risk to Marine ecosystem?	Paula Vanninen <i>VERIFIN, University of Helsinki</i>
16:38 – 16:54	Oral: #390 Ambient Ionization Techniques for the High-Throughput and Low-Cost Screening and Characterization of PFAS.	Patrick Fedick <i>Naval Air Warfare Center Weapons Division</i>
16:54 – 17:10	Oral: #737 Collision Cross Section (CCS) value as an additional identification point for chemical characterization: Development of a LC-ESI-TIMS-QTOFMS database for environmental (bio)monitoring studies	Bob Galvin <i>Bruker Daltonik GmbH & Co.</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

Beyond Mass Spectrometry: Making MS obsolete....

Theme: Instrumentation and methods
Chair: Albert Heck

Presentations:

15:30 – 15:50	Keynote: #773 The emerging landscape of single-molecule protein sequencing technologies	Chirlmin Joo <i>Delft University of Technology</i>
15:50 – 16:06	Oral: #354 Novel nano-electro-mechanical resonator MS system design	Christophe Masselon <i>CEA</i>
16:06 – 16:22	Oral: #142 Single Particle Mass Measurements for Weighing Viral Gene Delivery Particles and Monitoring SARS-CoV-2 / Antibody Interactions	Victor Yin <i>Universiteit Utrecht</i>
16:22 – 16:38	Oral: #227 External injection of trapped ions into a hemispherical electrostatic sector analyzer for Charge Detection Mass Spectrometry – a simulation study	John Hoyes <i>TrueMass</i>
16:38 – 16:54	Oral: #230 Direct single molecule imaging on a modified Q Exactive UHMR with electron holography capability	Albert Konijnenberg <i>Thermo Fisher Scientific</i>
16:54 – 17:10	Oral: #271 Nano-electro-mechanical sensor mass spectrometry for viral particles characterization.	Vaitson Çumaku <i>Commissariat à l'Énergie Atomique et aux Énergies Alternatives Grenoble</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

Proteomics: Protein-Protein Interaction

Theme: Life Sciences & Health
Chair: Anne-Claude Gingras & Devin Schweppe

Presentations:

15:30 – 15:50	Keynote: #783 BioPlex: Current Status and Future Prospects for AP-MS Mapping of the Human Interactome	Edward Huttlin <i>Harvard Medical School</i>
15:50 – 16:06	Oral: #256 High-throughput mass spectrometry methodology to fish peptide toxins from crude venoms by affinity capture on cell membrane receptors	Lou Freuville <i>University of Liège</i>
16:06 – 16:22	Oral: #380 Weighting the sweet glue of antibody-receptor interactions: structural and functional glycoprotein characterization by hyphenated MS techniques	David Falck <i>Leiden University Medical Center</i>
16:22 – 16:38	Oral: #553 Laser-Free Flash Oxidation (Fox) Hydroxyl Radical Protein Footprinting System Accurately Maps the Paratope and Epitope of TNFα Bound to Adalimumab	Emily Chea <i>GenNext Technologies</i>
16:38 – 16:54	Oral: #60 Native Top-Down Mass Spectrometry with Collision- and Electron-Based Dissociation Yields Higher Order Structure Information for Protein Complexes	Joseph Loo <i>University of California Los Angeles</i>
16:54 – 17:10	Oral: #464 Single-particle mass analysis applied to antibody-antigen complexes, intact ribosomes and viruses using Orbitrap-based charge detection mass spectrometry	Szu-Hsueh Lai <i>Utrecht University</i>
17:10 – 17:30	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

Young MS Scientists - Session B

Theme: Young MS Scientists
Chair: Ian Anthony & Kelly Stecker

Presentations:

11:00 – 11:20	Keynote: #764 Deciphering O-glycoprotease substrate preferences with O-Pair Search	Nicholas Riley <i>Stanford University</i>
11:20 – 11:36	Oral: #61 In vivo monitoring of flavor release using PTR-MS: Effect of oral processing behavior and food composition	Karina Gonzalez Estanol <i>Fondazione Edmund Mach, Wageningen University</i>
11:36 – 11:52	Oral: #279 High-mass MALDI-MS quantitatively analysis of noncovalent interactions of membrane	Na Wu <i>ETH Zürich</i>
11:52 – 12:08	Oral: #375 Metabolic investigation of inflammation and oxidative stress to facilitate COVID-19 disease prediction	Lieke Lamont <i>Leiden University</i>

12:08 – 12:24	Oral: #499 Towards Single Cell Glycomics	Guinevere Lageveen-Kammeijer <i>Leiden University Medical Center</i>
12:24 – 12:40	Oral: #339 Opening new horizons in lipidomics – ultra high-mass resolution mass spectrometry imaging with an orbitrap coupled to an external data acquisition system	Andrej Grgic <i>Maastricht University</i>
12:40 – 13:00	Panel discussion with speakers	

Parallel sessions 15:30 – 17:30

MS in Structural biology - Native MS, HDX-MS - Session B

Theme: Life Sciences & Health
Chair: Lisa Jones

Presentations:

15:30 – 15:46	Oral: #186 Cyclic ion mobility – mass spectrometry and electron capture dissociation probe dimerization of aggregation-prone IAPP	Aisha Ben-Younis <i>University College London</i>
15:46 – 16:02	Oral: #346 The dynamics of SARS-CoV-2 nsp7-11 polyprotein processing and complex formation	Kira Schamoni-Kast <i>Leibniz Institute for Experimental Virology</i>
16:02 – 16:18	Oral: #167 Know Your Target: Characterizing Snake Venom Protein Components by Native Mass Spectrometry	Irina Oganessian <i>ETH Zürich</i>
16:18 – 16:34	Oral: #328 Binding of a Potent SARS-CoV-2 Peptide Inhibitor Revealed by Integrated Hydrogen-Deuterium Exchange Mass Spectrometry and Cryo Electron Microscopy	Nadia Mokiem <i>Universiteit Utrecht</i>
16:34 – 16:50	Oral: #582 Structural mass spectrometry reveals insights into DNA triplex assemblies for antigene technologies	Tara Pukala <i>University of Adelaide</i>
16:50 – 17:06	Oral: #484 Cryo-EM samples of gas-phase purified protein assemblies from native electrospray ion-beam deposition	Tim Esser <i>University of Oxford</i>
17:06 – 17:30	Panel discussion with speakers	

Friday 2 September 2022

08:30 – 10:30 Parallel sessions (morning)
 10:30 – 11:00 Coffee break
 11:00 – 13:00 Parallel sessions
 13:00 – 14:00 Lunch break & Vendor shows
 14:00 – 15:00 Plenary session

14:00 – 15:00 **Plenary talk: #847 Air quality from space: indicator of human activity**

Prof. Pieterneel Levelt
 TU Delft

15:00 – 16:00 Closing ceremony
 16:00 – 18:00 Closing reception



Parallel sessions 08:30 – 10:30

Environmental MS: Earth and Space MS

Theme: Mass spectrometry across disciplines
Chair: Jos Oomens

Presentations:

08:30 – 08:50	Keynote: #748 Mass spectrometry and astropahs	Christine Joblin <i>Université Toulouse</i>
08:50 – 09:06	Oral: #668 The application of MALDI mass spectrometry imaging in the evaluation of pathogenesis of <i>Agrobacterium tumefaciens</i> in cultivated dicotyledons	Katarzyna Suśniak <i>Maria Curie Skłodowska University</i>
09:06 – 09:22	Oral: #637 Structure-aided profiling of natural organic matter by FTICR MS	Alexander Zherebker <i>Skolkovo institute of science and technology</i>
09:22 – 09:38	Oral: #673 Development and validation of a pyrolysis - gas chromatography – high resolution mass spectrometry method for the determination of nano- and microplastics in river water and sediment samples	Eva de Rijke <i>University of Amsterdam</i>
09:38 – 09:54	Oral: #220 Double throw, qualitative and semi-quantitative PFAS detection using DART-MS	Jan Jordens <i>VITO</i>
09:54 – 10:10	Oral: #257 Rapid cyanobacteria species identification with high sensitivity using native mass spectrometry	Jaspreet Sound <i>University of Birmingham</i>
10:10 – 10:30	Panel discussion with speakers	

Parallel sessions 08:30 – 10:30

Miniaturization, Lab-on-a-chip, In Situ Applications

Theme: Instrumentation and methods

Chair: Sarfaraz Syed

Presentations:

08:30 – 08:50	Keynote: #808 Reactions of nanoparticles	Thalappil Pradeep <i>Indian Institute of Technology Madras</i>
08:50 – 09:06	Oral: #82 Food impact assessment of exhaled breath volatile organic compounds using a portable membrane inlet mass spectrometer	Milena Jakšić <i>BioSense Institute, University of Novi Sad</i>
09:06 – 09:22	Oral: #189 Aptapaper – an Aptamer-Functionalized Glass Fiber Paper Platform for Rapid Upconcentration and Detection of Small Molecules	Sandra Martínez-Jarquín <i>ETH Zürich</i>
09:22 – 09:38	Oral: #675 3-dimensional tissue sampling in the nanoliter-voxel scale by nanosecond-IR-laser ablation for analysis of proteoforms with top-down mass spectrometry	Hartmut Schlüter <i>University of Hamburg</i>
09:38 – 09:54	Oral: #24 Detection of metabolic changes in HFD-ApoE^{-/-} model by SP6 peptide using MRMS	Matthias Witt <i>Bruker Daltonics GmbH & Co.</i>
09:54 – 10:10	Oral: #59 Development of an automated continuous pullback device for millisecond HDX-MS	Cristina Lento <i>York University</i>
10:10 – 10:30	Panel discussion with speakers	

Parallel sessions 08:30 – 10:30

Proteomics: Post-Translational Modifications and their Cross-talk

Theme: Life Sciences & Health

Chair: Michiel Vermeulen & Jesper Olsen

Presentations:

08:30 – 08:50	Keynote: #799 Kinase signalling circuits in health and disease	Pedro Beltrao <i>ETH Zürich</i>
08:50 – 09:06	Oral: #457 Unraveling T cell - tumor cell communication using hybrid quantitative MS	Kelly Stecker <i>Utrecht University</i>
09:06 – 09:22	Oral: #554 Combined metabolic and chemical (cometchem) labelling using stable isotopes to reveal site-specific histone acetylation/deacetylation rates by LC-MS/MS	Marcel Kwiatkowski <i>University of Innsbruck</i>
09:22 – 09:38	Oral: #386 Optimization of Suspension Trapping (S-Trap) Methods for Phosphoproteomics	Fujia Wang <i>Utrecht University</i>

09:38 – 09:54	Oral: #476 Isobaric labeling mass spectrometry to monitor ubiquitination dynamics upon proteasome modulation by small molecule inhibitors	Jeroen Demmers <i>Erasmus MC</i>
09:54 – 10:10	Oral: #267 Unlocking the role of tubulin polyglutamylation enzymes involved in neurodegeneration with top-down proteomics	Megan Gant <i>Institut Pasteur</i>
10:10 – 10:30	Panel discussion with speakers	

Parallel sessions 08:30 – 10:30

High Resolution Mass Spectrometry - Session B

Theme: Instrumentation and methods
Chair: Julia Chamot-Rooke

Presentations:

08:30 – 08:46	Oral: #566 Characterization and quantification of lipid nanoparticle components and their degradants in vivo using an LC-HRAM MS platform	Siegrun Mohring <i>Thermo Fisher Scientific GmbH</i>
08:46 – 09:02	Oral: #718 Fine Structural Elucidation of Phospholipids with Practical Electron-Based Fragmentation on Q-TOF Instruments	Hania Khouri <i>Agilent Technologies</i>
09:02 – 09:18	Oral: #640 ESI and MALDI FTICR MS analysis of skin-relevant lipids after exposure to long wavelength UV radiation	Samuele Zoratto <i>TU Wien</i>
09:18 – 09:34	Oral: #579 High-Depth Multiplexed Drug Profiling with a Modified Tribrid Mass Spectrometer	Steven Shuken <i>Harvard Medical School</i>
09:34 – 09:50	Oral: #561 Charge state separation mass spectrometry on TOF platform for top-down analysis	Pavel Ryumin <i>SCIEX</i>
09:50 – 10:06	Oral: #569 Assessing key attributes of adeno-associated viral proteins using HPLC-FLD-intact accurate mass analysis	Julia Kraegenbring <i>Thermo Fisher Scientific</i>
10:06 – 10:30	Panel discussion with speakers	

Parallel sessions 08:30 – 10:30

Metabolomics - Session B

Theme: Life Sciences & Health
Chair: Esther Zaal

Presentations:

08:30 – 08:46	Oral: #128 Monitoring gut microbiota activity by secondary electrospray ionization-high resolution mass spectrometry	Jiayi Lan <i>ETH Zürich</i>
08:46 – 09:02	Oral: #270 Developing and Applying a Separated Pooled Quality Control Strategy to Untargeted LC-MS/MS Exposomics	Gianfranco Frigerio <i>University of Luxembourg</i>

09:02 – 09:18	Oral: #433 Chemical profiling of the human skin surface for malaria vector control using a non-invasive sorptive sampler with GCxGC-TOFMS and UPLC-IMS-HRMS	Madelen Wooding <i>University of Pretoria</i>
09:18 – 09:34	Oral: #647 Structural annotation of novel biomarkers for inborn errors of metabolism with infrared ion spectroscopy	Pieter Kooijman <i>Radboud University</i>
09:34 – 09:50	Oral: #558 Collision Induced Dissociation and Ultraviolet Photodissociation for Qualitative and Quantitative LC-MS/MS analysis of Low Molecular Weight Compounds	Romain Giraud <i>University of Geneva</i>
09:50 – 10:06	Oral: #636 Systematic comparison of different derivatisation reagents for determination of multiple vitamin D3 metabolites using LC-MS/MS	Anastasia Alexandridou <i>Humboldt-Universität zu Berlin</i>
10:06 – 10:30	Panel discussion with speakers	



Parallel sessions 11:00 – 13:00

Ambient Technologies (and their applications)

Theme: Instrumentation and methods
Chair: Helen Cooper

Presentations:

11:00 – 11:20	Keynote: #465 Nextgen IR-MALDESI mass spectrometry imaging: a novel platform with diverse applications in human health and disease	David Muddiman <i>North Carolina State University</i>
11:20 – 11:36	Oral: #36 Immuno-enriched microsphere – magnetic blade spray tandem mass spectrometry for domoic acid in mussels	Ariadni Geballa-Koukoura <i>Wageningen Food Safety Research (WFSR)</i>
11:36 – 11:52	Oral: #101 High-Throughput Bioanalysis using Desorption Electrospray Ionization Mass Spectrometry (DESI-MS)	Nicolas Morato <i>Purdue University</i>
11:52 – 12:08	Oral: #143 Native in situ top-down identification and native ambient mass spectrometry imaging of proteins and protein complexes from rat brain	Emma Sisley <i>University of Birmingham</i>
12:08 – 12:24	Oral: #511 Advances in sample analysis speed and clinical diagnostics using liquid AP-MALDI MS	Rainer Cramer <i>University of Reading</i>
12:24 – 12:40	Oral: #560 Direct real-time analysis of living cells using laser desorption-rapid evaporative ionization mass spectrometry (LD-REIMS)	Stefania Maneta-Stavarakaki <i>Imperial College London</i>
12:40 – 13:00	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

Imaging MS - applications in Life Science & Health - Session B

Theme: Life Sciences & Health
Chair: Lieke Lamont & Suichi Shimma

Presentations:

11:00 – 11:20	Keynote: #800 Applications of high resolution mass spectrometry imaging in pharmaceutical research and food sciences	Andreas Römpf <i>University of Bayreuth</i>
11:20 – 11:36	Oral: #313 Towards a new era in spatialomics: M3-imaging of intact proteins and other biomolecules in tissues using mass spectrometry	Mark Lim <i>AmberGen Incorporated</i>
11:36 – 11:52	Oral: #393 Desi mass spectrometry imaging of lipids in advanced human atherosclerotic plaque	Nuria Slijkhuis <i>Erasmus Medical Center</i>
11:52 – 12:08	Oral: #290 Quantitative Mass Spectrometry Imaging to Study Lipid Metabolism in Parkinson's Disease Model	Michiel Vandenbosch <i>Maastricht University</i>
12:08 – 12:24	Oral: #576 Combined O-glycanase and O-glycoprotease approach for analysis of O-glycosylation in mucinous tumor tissues by MALDI imaging mass spectrometry	Richard Drake <i>Medical University of South Carolina</i>
12:24 – 12:40	Oral: #697 Visualizing the interaction of the two fungi <i>Trichoderma atroviride</i> and <i>Botrytis cinerea</i> with MALDI Imaging	Stefan Kirnbauer <i>Technische Universität Wien</i>
12:40 – 13:00	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

Food, Nutrition & Agriculture

Theme: Food and (Bio)Pharma
Chair: Maurien Oltshoorn & Arjen Gerssen

Presentations:

11:00 – 11:20	Keynote: #755 Using mass spectrometry based techniques to discover molecular target for flavor innovations in food	Corinna Dawid <i>Technical University of Munich</i>
11:20 – 11:36	Oral: #549 Structural elucidation of photo-molecular heater byproducts using infrared ion spectroscopy	Matthias Vink <i>FELIX (Radboud University)</i>
11:36 – 11:52	Oral: #494 FOOD AUTHENTICATION: Mass Spectrometric Strategies for Detecting Food Fraud in Routine Laboratories	Marina Creydt <i>University of Hamburg</i>
11:52 – 12:08	Oral: #432 Human exposure to extractables and leachables from single-use plastic food contact materials: a disposable sorptive sampler, UHPLC-IMS-HRMS and GC×GC-TOFMS	Madelien Wooding <i>University of Pretoria</i>

12:08 – 12:24	Oral: #381 Validation of immunoaffinity-based mass spectrometry approaches for the detection of ruminant-specific peptides in animal feed	Tessa Höper <i>German Federal Institute for Risk Assessment</i>
12:24 – 12:40	Oral: #436 Considerations for developing an analytical strategy for small molecule MS-based screening in industrial biotechnology	Leon Coulier <i>DSM</i>
12:40 – 13:00	Panel discussion with speakers	

Parallel sessions 11:00 – 13:00

JMS Awardees session

→ Program to be announced later!

