



12th MS J-day

Pisa
22-23rd May 2025

1st International Edition



CONFERENCE PROGRAM



Cultural Heritage

Environment

Life Science

MS Technology

Food Science

Plant Science



Invited Speakers



Diego Tamburini
The British Museum



Greta Bindi
University of Milan Bicocca



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May 22nd



12:00 *Registration*

14:00 ***Istitutional
Greetings:***

Fabio Beltram, *Scuola Normale Superiore (PI)*
Giuliana Bianco, *Università degli Studi della
Basilicata (PZ)*

Plenary

14:15

Diego Tamburini
The British Museum

Advancing Dye Identification in Historical Textiles
Using Mass Spectrometry-Based Molecular
Databases

14:45

Cecilia Campi
University of Pisa

Investigating Silk Ageing through
Thermoanalytical Techniques

Cultural Heritage

15:00

Giulia Caroti
University of Pisa

The chemistry of mixed media paints: the key
role of the paint microstructure in the co-
oxidation of proteins and lipids

15:15

Elena C. L. Rigante
University of Bari

The transformation of egg proteins in aged
painting layers through UV-induced processes: a
proteomic perspective

15:30

Tabata Bezzo Llufrío
*Istituto Zoopr.
Sperimentale del
Piemonte*

Nitrofuran metabolite residues in honey: the
challenge with small molecules

Food Science

15:45

Samuele Pellacani
*University of
Modena and R.E.*

A Fused Approach Using Ion Mobility
Spectrometry and Spectroscopy for Honey
Authentication

16:00

Simone Mazza
*Istituto Zoopr.
Sperimentale
dell'Umbria*

TTXs in molluscs and blue crabs from Adriatic
Sea: do these species represent a risk for human
consumption?

16:15 **Coffee Break**

Poster Session 1



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Food Science

- | | | |
|-------|---|---|
| 16:45 | Lorenzo Zingaro <i>Agilent</i> | LCMS Workflow for PFAS Analysis in Food Products <i>Briefs on instrumentation</i> |
| 16:55 | Claudia Lombroni <i>Free University of Bozen-Bolzano</i> | Antioxidant activity of anthocyanins from red cabbage by an AAPH-incubating method using liquid chromatography coupled with high resolution tandem mass spectrometry |
| 17:10 | Davide Coniglio <i>University of Bari Aldo Moro</i> | Amino acid profiling of barattiere (<i>Cucumis melo</i>) by hydrophilic interaction liquid chromatography and high-resolution MS |
| 17:25 | Luana Izzo <i>University of Naples Federico II</i> | Bioactive extracts from asparagus by-product |
| 17:40 | Sara Palmieri <i>University of Teramo</i> | Rapid sonochemical synthesis of molecularly imprinted polymers (MIPs) coupled with high-resolution mass spectrometry for the selective extraction of phytoprostanes in plants |
| 17:55 | Alessia Di Noi <i>University of Rome la Sapienza</i> | Direct Detection of Oregano Adulteration with AP-MALDI-MS |
| 18:10 | Fabiola Eugelio <i>University of Teramo</i> | UHPLC-Q-Orbitrap-HRMS combined with chemometrics as a tool for authenticating the origin and cultivation of Italian <i>Lupinus albus</i> L. |
| 18:25 | Lorenza Marinaccio <i>University of Chieti-Pescara</i> | Evaluation of the phytochemical profile of walnut fresh fruit extract (<i>Juglans Regia</i>) and its in vitro and in vivo biological activity |
| 18:40 | End of session | |



Meet new friends at Scacco Malto, the official Conference Pub!

20:30 Social Dinner at "Pizzeria L'Arciere"



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Plenary

9:00 Greta Bindi
*University of Milan
Bicocca*

Picture this: Mass Spectrometry Imaging to unveil the multiomic layers of the tumor immune environment

Life Science

9:30 Davide Franchina
Stanford University
Integration of mass cytometry imaging and glyco-imaging to characterize B cell follicle dynamics

9:45 Veronica De Giorgis
*University of
Piemonte Orientale*
A Proteomic Workflow that Combines Mass-Spectrometry and Drug-Repurposing to Find New Candidate Drugs for Soft-tissue Sarcoma

10:00 Sabrina Bianco
*University of Naples
Federico II*
Brain proteomics provides new insights into the DiGeorge syndrome

10:15 Michele Costanzo
*University of Naples
Federico II*
Mitochondrial proteomics highlights structural and functional alterations in methylmalonic acidemias

10:30 Mariano De Cristofaro
University of Pisa
Are we measuring the right peptides? Unveiling cross-reactivity in natriuretic peptides immunoassays

10:45 Vanna Denti
*University of Milan
Bicocca*
Enhancing proteomics characterization of thyroid nodules: a pixel-classifier for mass spectrometry imaging analyses

11:00 Lisa Pagani
*University of Milan
Bicocca*
Proteomic insights into Therapy-Induced Senescence in lung cancer: a DIA-PASEF Mass Spectrometry approach

11:15 **Coffee Break**

Poster Session 2

11:45 Gloria Cenci
University of Parma

Functionalized Nanomaterials Based on 2D Nanocrystals and Metal Nanoparticles Activated by Radiation for Antitumoral Therapy



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Life Science

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| 12:00 | Nicole Grinovero <i>IRCCS Giannina Gaslini</i> | From birth to term: an integrated proteomic and lipidomic profiling of preterm neonatal development |
| 12:15 | Carolina Pinto <i>University of Aveiro</i> | Unraveling the Plasma Lipidome: How Physical Activity Shapes Lipid Metabolism in Cancer Patients |
| 12:30 | Simone Serrao <i>University of Milan Bicocca</i> | Metabolic and Lipidomic Responses to Hyperoxic recovery during Hypoxic Training in Elite Alpine Skiers |
| 12:45 | Lucia Santorelli <i>Telethon Institute of Genetics and Medicine</i> | Mass Spectrometry Approach reveals differential ER remodeling by FAM134B isoforms during myogenesis |
| 13:00 | Gaia Boschetti <i>IIT</i> | Mass spectrometry to investigate elxacaftor/tezacaftor/ivacaftor (ETI) impact on neurodevelopment |

13:15 **Lunch Break**

MS Tech.

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|-------|---|---|
| 14:45 | Giulio Calza <i>Bruker</i> | Bruker GlycoTyper TM : A novel MALDI-MS-based solution for exploiting the power of targeted glycomic analysis as a new source of biomarkers in liquid biopsies – Systemic Lupus Erythematosus disease course classification as a case-in-point |
| 15:00 | Emanuele Ceccon <i>Restek S.r.l.</i> | 20 years of Biphenyl |
| 15:15 | Francesco Ferella <i>Infn - Ings</i> | Ultra-trace elemental analysis is carried out using ICP-MS and HR-ICP-MS, with future advancements expected through the integration of a laser ablation system for direct solid sample analysis |
| 15:30 | Alessandro Fabiani <i>Perkin Elmer</i> | The PerkinElmer QSight 500, Ultimate Robustness for Dirty Matrices – Unique Source Design for Reduced Sample Preparation |

Briefs on
instrumentation



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Environment and Plant Science

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|-------|--|---|
| 15:40 | Julia Gambetta Vianna <i>Ca'Foscari University</i> | Mass Spectrometry and QuEChERS-based Extraction: Tracing Emerging Contaminants in Antarctic marine organisms |
| 15:55 | Azzurra Spagnesi <i>Ca'Foscari University</i> | Biomass burning tracers in polar and alpine ice cores: high-resolution analyses with the novel Fast Liquid Chromatography - tandem Mass Spectrometry (FLC - MS/MS) coupled with a Continuous Flow Analysis (CFA) system |
| 16:10 | Francesco De Cesari <i>University of Turin</i> | U-Pb geochronology by mass spectrometry: new insights to the evolution of the Pinerolo- Sanfront Unit, Dora-Maira Massif (Western Alps) |
| 16:25 | Francesca Pardi <i>Istituto Zoopr. Sperimentale dell'Umbria</i> | Per- and polyfluoroalkyl substances (PFASs) and Brominated flame retardants (BFRs): background levels in fish of Central Adriatic Sea |

16:40 **Coffee Break**

Environment and Plant Science

- | | | |
|-------|---|---|
| 17:10 | Carmela Zacometti <i>Istituto Zoopr. Sperimentale delle Venezie</i> | Thanatometabolomics in wildlife: Identifying potential metabolic markers of post-mortem intervals in wild animals by ambient mass spectrometry |
| 17:25 | Giulia Martella <i>Eawag</i> | Advancements in Mass Spectrometry for DNA Adductomics: Method Development for Biological Effect Monitoring in Wildlife |
| 17:40 | Daniel Bona <i>University of Genoa</i> | Optimization of LC-Q-TOF Mass Spectrometry and Chromatographic Parameters for the analysis of PFAS: a multivariate approach to maximize sensitivity and resolution |



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Environment and Plant Science

17:55 Erica Ceccardi
*University of
Genoa*

Optimization of Mass Spectrometry parameters for Emerging Contaminants detection: A comparative study of Triple Quadrupole and Q-TOF analyzers

18:10 Sara Avesani
*University of
Padova*

The comparison between Proton Transfer Reaction and Adduct Ionization Mechanism for volatile organic compound analysis in *Pisum sativum* L.

18:25 Valentina
Lazazzara
CNR-IPSP

Optimized HPLC-DAD-ESI-QTOF-MS method for simultaneous detection and quantification of abscisic acid and its metabolites in hemp (*Cannabis sativa* L.) leaf extracts

18:40 ***Award Ceremony and Concluding Remarks***



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NORMALE
SUPERIORE

Sponsorship



Agilent Technologies





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Poster Sessions



Poster Session 1

Alessandro Arrigo,
University of Pisa

Understanding the Curing Process of Pre-Polymerized Oils:
A Molecular Approach to Historical Painting Techniques.

Elena Ducoli,
University of Pisa

Impact of Atomic Oxygen and Laser Surface Cleaning
Techniques on Cultural Heritage Materials: A Mass
Spectrometry Investigation

Claudia Fumagalli,
University of Milan Bicocca

Using the power of timsTOF fleX to study the N-glycome
extracted from dried blood spot

Giulia Moretto,
University of Pavia

Anti-glycative properties and bioaccessibility investigations
of Diospyros kaki polyphenols

Bianca Bonato,
University of Padova

VOCs communication shapes the kinematic behavior of
pea plants in individual and social contexts

Francesca Monzillo,
University of Salerno

Glucosinolate variation among organs and growth stages
in Eruca sativa cultivated in a closed system

Andrea Cinnirella,
University of Bari Aldo Moro

Synthesis of novel reactive MALDI matrices for the analysis
of low molecular weight compounds

Martina Sasso,
*University of Naples
Federico II*

The Role of Ophrys Orchids as Bioindicators of Pristine
Environments



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Poster Sessions



Poster Session 2

Alberto Frisco,
*Center for Advanced
Studies and Technology*

Metabolomic approach for unraveling novel Gaucher disease biomarkers on dried blood spot

Francesco Terlizzi,
University of Bari Aldo Moro

Synthesis and application of deuterated standards for advanced food safety analysis

Tabata Bezzo Llufrío,
*Istituto Zoopr. Sperimentale
del Piemonte*

Phthalates diesters in Mediterranean zooplankton

Vito Nettis,
University of Bari Aldo Moro

Lipidome of extracellular vesicles in hypoxic pancreatic cancer

Natalia Shelly Porto,
University of Milan Bicocca

Exploring 6-Aza-2-Thiothymine as a MALDI-MSI Matrix for Lipid Mapping in FFPE Samples

Giorgia Spalluto,
*Center for Advanced
Studies and Technology*

Metabolomic investigations on tear fluid for the identification of new biomarkers of glaucoma progression

Fateme
Mohammadinezhad,
*University of Piemonte
Orientale*

An in-depth mapping of CSF protein complexes in ALS

Nicole Monza,
University of Milan Bicocca

Advances in thyroglobulin measurement: exploring dried blood spot mass spectrometry for enhanced clinical utility



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Where



Venue



Palazzo della Carovana
Piazza dei Cavalieri, 7
Pisa
Aula Azzurra

Conference Pub



Via Santa Cecilia, 15
Pisa

Social Dinner



Via la Nunziatina, 14,
Pisa

