

Program

Monday 26.8.2024

08:00	Registration opens
08:45 – 09:00	Welcome from the local committee and the Nordic Metabolomics Society (Presidentti auditorium)
09:00 – 10:25	<p>Session 1 part 1 – Metabolomics data processing and analysis (Presidentti auditorium)</p> <p>Chair: Prof. <i>Tuulia Hyötyläinen</i>, School of Science and Technology, Örebro University</p> <p>09:00–09:40 Keynote lecture: Unleashing the Power of Untargeted Metabolomics: From Metabolite Annotation to Single-Cell Analysis. Prof. <i>Zheng-Jiang Zhu</i>, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences</p> <p>09:40–09:55 TriplotGUI, A Molecular Epidemiology Toolbox for Investigating Associations between Exposome, Metabolome and Outcomes. <i>Yingxiao Yan</i>, M.Sc., Food and Nutrition Sciences, Department of Life Sciences, Chalmers University of Technology</p> <p>09:55 – 10:10 Predicting plasma metabolites based on the saliva samples. <i>Retu Haikonen</i>, M.Sc., Institute of Public Health and Clinical Nutrition, University of Eastern Finland</p> <p>10:10 – 10:25 Impact of PFAS on lipid metabolism in MASLD is mediated through steroids. Dr. <i>Pauli Tikka</i>, Turku Bioscience Centre, University of Turku and Åbo Akademi University</p>
10:25 – 11:00	Coffee and posters (Foyer of Biocity and Manu)
11:00 – 12:00	<p>Session 1 part 2 – Metabolomics data processing and analysis (Presidentti auditorium)</p> <p>Chair: Prof. <i>Tuulia Hyötyläinen</i>, School of Science and Technology, Örebro University</p> <p>11:00–11:30 Giving metabolites (and lipids) a chemical and biological context with open science Dr. <i>Egon Willighagen</i>, Department of Bioinformatics - BiGCaT, NUTRIM, Maastricht University</p> <p>11:30–11:45 Evaluation of the stability of metabolome acquired from human blood microsampling. Dr. <i>Anh Hoang Nguyen</i>, School of Medical Sciences, Faculty of Medicine and Health, Örebro University</p> <p>11:45–12:00 Harmonizing lipidomics data across multiple laboratories in the LITMUS project – towards biomarkers of MASLD. Dr. <i>Aidan McGlinchey</i>, School of Medical Sciences, Faculty of Medicine and Health, Örebro University</p>
12:00 – 13:30	Lunch and posters (Atrium of Biocity and Manu)

Program

Monday 26.8.2024

13:30 – 15:00

Session 2 part 1 – Discovery and elucidation of the chemical complexity of the metabolome
(Presidentti auditorium)

Chair: Prof. *Rikard Landberg*, Division Food and Nutrition Science, Chalmers University of Technology

13:30–14:10 Keynote lecture:

Decoding the chemical language of plants.

Dr. *Tomáš Pluskal*, Junior Group Leader, IOCB Prague.

14:10–14:25 Enhancing Analytical Coverage: Optimization of Solid-Phase Extraction for Non-Targeted Urine Screening via Dual-Column Analysis.

Žan Rekar, M.Sc., Department of Environmental Sciences, Jožef Stefan Institute

14:25–14:40 Investigating the presence and distribution of UV-absorbing mycosporine-like amino acids in organs of different fish species with liquid chromatography and molecular networking.

Dr. *Fabien Hammerle*, Institute of Pharmacy/Pharmacognosy, University of Innsbruck

14:40–14:55 Development of chemical biology tools for the investigation of gut microbiota-derived metabolites in human samples.

Ioanna Tsiara, M.Sc., Uppsala University

14:55 – 15:30

Coffee and posters
(Foyer of Biocity and Manu)

15:30 – 16:55

Session 2 part 2 – Discovery and elucidation of the chemical complexity of the metabolome
(Presidentti auditorium)

Chair: Prof. *Rikard Landberg*, Division Food and Nutrition Science, Chalmers University of Technology

15:30 – 16:00 Biochemical profiling of burn wound healing.

Prof. *Óttar Rolfsson*, Faculty of Medicine, School of Health Sciences, University of Iceland

16:00 – 16:15 Exploring Gut Microbiota Metabolism – New Chemical Biology Tools for Metabolomics Analysis.

Vladyslav Dovhalyuk, M.Sc., Uppsala University

16:15 – 16:35 Sponsor presentation: Metabolon

From Data to Discovery: Metabolomics in Large Cohort Studies

Dr. *Natasa Giallourou*, Field Metabolomics Scientist, Metabolon

16:35 – 16:55 Sponsor presentation: Nightingale Health

Population-scale metabolomics from blood and urine

Dr. *Sini Kerminen*, Senior Data Scientist, Nightingale Health

17:00 – 20:00

Welcome reception, Posters and drinks
(Ravintola Mauno BioCity)

Program

Tuesday 27.8.2024

09:00 – 10:25	<p>Session 3 part 1 – Metabolome and exposome in health and disease (Presidentti auditorium)</p> <p>Chair: Assoc. Prof. <i>Guro F. Giskeødegård</i>, Norwegian University of Science and Technology (NTNU)</p> <p>09:00–09:40 Keynote lecture: Host-microbe co-metabolism in health and disease. Prof. <i>Jingyuan Fu</i>, University Medical Center Groningen</p> <p>09:40–09:55 Survival of the littlest: Navigating sepsis diagnosis beyond inflammation in preterm neonates. <i>Manchu Umarani Thangavelu</i>, M.Sc., Metabolomics and Analytics Centre, Leiden University</p> <p>09:55–10:10 Metabolic disruptions induced by PFAS exposure: insights from occupational, cellular, and avian models. Prof. <i>Tuulia Hyötyläinen</i>, School of Science and Technology, Örebro University</p> <p>10:10–10:25 Associations between inflammation markers and breast cancer risk in the HUNT population. Assoc. Prof. <i>Julia Debik</i>, Department of Public Health and Nursing, Norwegian University of Science and Technology (NTNU)</p>
10:25 – 11:00	<p>Coffee and posters (Foyer of Biocity and Manu)</p>
11:00 – 12:00	<p>Session 3 part 2 – Metabolome and exposome in health and disease (Presidentti auditorium)</p> <p>Chair: Assoc. Prof. <i>Guro F. Giskeødegård</i>, Norwegian University of Science and Technology (NTNU)</p> <p>11:00–11:30 Human milk metabolomics: insights into maternal stress, secretor status and stage of lactation. Dr. <i>Maaria Kortensniemi</i>, Food Sciences Unit, University of Turku</p> <p>11:30–11:45 Serum Lipidomics Profile of Neuropathy in Type 1 Diabetes. Dr. <i>Tik Muk</i>, Steno Diabetes Center Copenhagen</p> <p>11:45–12:00 Isotope-guided metabolomics dissects arginine metabolism in proteinuria. <i>Maria Chrysopoulou</i>, M.Sc., Department of Biomedicine, Aarhus University</p>
12:00 – 13:30	<p>Lunch and posters (Atrium of Biocity and Manu)</p>
13:30 – 15:00	<p>Session 4 part 1 – Analytical advances in metabolomics (Presidentti auditorium)</p>

13:30 – 15:00

Session 4 part 1 – Analytical advances in metabolomics
(Presidentti auditorium)

Chair: Prof. *Margrét Thorsteinsdóttir*, Faculty of Pharmaceutical Sciences, University of Iceland

13:30–14:10 Keynote lecture:

Analytical strategies and data processing tools for improving our understanding of clear cell renal cell carcinoma.

Dr. *Maria Monge*, Centro de Investigaciones en Bionanociencias, Buenos Aires

14:10–14:30 Sponsor presentation: Bruker

Bruker Comprehensive solutions for Metabolomics: NMR and MS

Dr. *Pedro Lopes*, Team Lead NMR Field Applications and Dr. *Cristian De Gobba*, Field Application Specialist, Bruker

14:30–14:45 Spatial mapping of oxylipin lipid mediators in the airways using targeted mass spectrometry imaging.

Dr. *Matthew J. Smith*, Unit of Integrative Metabolomics, Institute of Environmental Medicine, Karolinska Institutet

14:45–15:00 Spatial multi-omics characterization of epithelial glands reveals novel prognostic signatures in prostate cancer.

Abhibhav Sharma, M.Sc., HUNT Center for Molecular and Clinical Epidemiology, Department of Public Health and Nursing, Norwegian University of Science and Technology (NTNU)

15:00 – 15:30

Coffee and posters
(Foyer of Biocity and Manu)

15:30 – 16:20

Session 4 part 2 – Analytical advances in metabolomics
(Presidentti auditorium)

Chair: Prof. *Margrét Thorsteinsdóttir*, Faculty of Pharmaceutical Sciences, University of Iceland

15:30–15:50 Sponsor presentation: Waters

Pushing the Boundaries of Science with Multi Reflecting Time of Flight Technology

Dr. *Ross Chawner*, Development Specialist, Waters

15:50–16:05 Correlation between oxidized lipid species and human multiple sclerosis revealed by silver-doped PA nano-DESI imaging.

Dr. *Gábor Tóth*, Dept of Chemistry-BMC, Uppsala University

16:05–16:20 Stable isotope labeling reveals metabolic insights in sucrase-isomaltase deficiency, *Jasmin Hjerresen*, MSc, Novo Nordisk Foundation Center for Basic Metabolic Research, Faculty of Health and Medical Sciences, University of Copenhagen

16:20 – 17:15

Session 5 – Short talks from early career members
(Presidentti auditorium)

Chair: Dr. *Katja B Prestø Elgstøen*, Oslo University Hospital

Untargeted exploration of the metabolomic coverage of blood microsampling: A comparison between Mitra®, Capitainer®, and Whatman™ 903 cards,
Dennisse Avella, MSc, Afekta Technologies Ltd.

Met-ID: An Open-Source Software for Comprehensive Annotation of Multiple On-Tissue Chemical Modifications in MALDI-MSI,
Patrik Bjärterot, MSc, Department of Pharmaceutical Biosciences, Uppsala University

Profiling Metabolic Reprogramming of CD4+ T cell Activation by 1,2 ¹³C-Glucose Fluxomics Platform and Lipidomics,
Ziyu Yang, MSc, Turku Bioscience Centre, University of Turku

ER-calcium dysregulation rewires mitochondrial metabolism in new stem cell-derived motor neuron disease models,
Diego González Martín-Calero, MSc, Faculty of Medicine, University of Helsinki

Maternal microbial metabolites in the fetal intestine and their effects on immunomodulation and epithelial function,
Roselydiah Makunja, MSc, Veterinary Biosciences, University of Helsinki

Investigation of Infection Flavonoids in Root Exudates of the Legume Lotus Japonicus,
Camilla Lind Salomonsen, MSc, Department of Chemistry, Aarhus University

Optimizing microdissection sample sizes for reliable non-targeted LC-MS metabolomic profiling of host-microbiota metabolites in chicken gut samples,
Topi Meuronen, MSc, Afekta Technologies Ltd.

Elucidating the metabolic characteristics in the developing human liver through genome-scale metabolic modelling,
Abhijit Paul, Turku Bioscience Centre, University of Turku

Method development and comprehensive analysis for untargeted metabolomics of mouse stool using TIMS-QToF-MS/MS and NMR,
Denis Ispan, MSc, Medical Faculty University of Tübingen

19:00

Conference Dinner
Turku Castle

09:00 – 10:25

Session 6 part 1 – Optimising health and performance through lifestyle
(Presidentti auditorium)

Chair: Dr. *Iman Zarei*, Public Health and Clinical Nutrition, University of Eastern Finland

09:00–09:40 Keynote lecture:

Importance of the (Poly)phenol Metabolome for Human Health.

Dr. *Ana Rodriguez-Mateos*, Department of Nutritional Sciences, King's College London

09:40–09:55 Unravelling human sugar profiles: Applications in human nutrition and health.

Carina I. Mack, M.Sc., Department for Safety and Quality of Fruit and Vegetables, Max Rubner-Institut

09:55–10:10 Neuroactive compounds in Tomatoes and their role in the development of Neurodegenerative diseases via the Gut-brain axis using a multi-Omics approach.

Ana Kovačič, M.Sc., Metabolomics Unit, Research and Innovation Centre - Food and nutrition, Fondazione Edmund Mach

10:10–10:25 Systemic metabolic fingerprint of two-week step-reduction in older adults: a secondary analysis of ENDURE randomized controlled trial.

Assoc. Prof. *Eija K Laakkonen*, Faculty of Sport and Health Sciences, University of Jyväskylä

10:25 – 11:00

Coffee and posters
(Foyer of Biocity and Manu)

11:00 – 11:30

Session 6 part 2 – Optimising health and performance through lifestyle
(Presidentti auditorium)

Chair: Dr. *Iman Zarei*, Public Health and Clinical Nutrition, University of Eastern Finland

11:00–11:15 Ceramide management as a strategy for reducing cardiovascular risk in individuals with diabetes.

Kristina Pigsborg, M.Sc., Steno Diabetes Center Copenhagen

11:15–11:30 Metabolic similarities of anorexia nervosa patients and athletes: Results of a plasma metabolomics analysis in women of different energy status groups.

Dr. *Sonja Lackner*, Division of Immunology, Medical University of Graz

11:30 – 12:00

Closing and awards
(Presidentti auditorium)