PROGRAM

3rd Nordic Metabolomics Conference 2023

October 18-20, 2023
Trondheim, Norway

Welcome words

The 3rd Nordic Metabolomics Conference is set to take place in Trondheim from October 18 to 20, 2023, promising a rich array of engaging sessions, discussions, and an exciting social agenda. Professor Ron Heeren will inaugurate the event with his keynote lecture, "Spatial Metabolomics: from single cells to translational diagnostics."

With an extensive lineup of over 35 presentations, the conference will delve into emerging metabolomics areas such as spatial metabolomics, gut microbiome metabolomics, clinical metabolomics, and computational methods. The program will also explore various application areas of metabolomics, featuring a mix of oral presentations, speed talks, and posters, including contributions from our generous sponsors showcasing the latest developments in metabolomic methodologies.

A significant portion of the program is dedicated to nurturing early-career researchers, highlighted by a special Early Career Event and multiple presentations tailored to their needs. Nordic Metabolomics Society is proud to offer travel grants to support the participation of these emerging talents.

Beyond the scientific discourse, attendees can immerse themselves in a well-crafted social program, providing the opportunity to explore the charming city of Trondheim and savor the delectable delights of Nordic cuisine.

On behalf of the Nordic Metabolomics Society and the scientific organizing committee I cordially welcome everybody to the 3rd Nordic Metabolomics Conference.

Tuulia Hyötyläinen
Chair of the NMS Board

Organizing and Scientific committee

Guro Giskeødegård
Norwegian University of Science and Technology, Trondheim, Norway

Nils J. Færgeman
University of Southern Denmark, Odense, Denmark

Daniel Globish
Uppsala University, Uppsala, Sweden

Tone Frost Bathen
Norwegian University of Science and Technology, Trondheim, Norway

Margrét Thorsteinsdóttir
University of Iceland, Reykjavik, Iceland

Olli Karkkainen
University of Eastern Finland, Kuopio, Finland

Katharina Herzog
Lund University, Lund, Sweden

Julia Debik
Norwegian University of Science and Technology, Trondheim, Norway

Early Career Event

Maria K. Andersen
Norwegian University of Science and Technology, Trondheim, Norway

Matteo Sangermani
Norwegian University of Science and Technology, Trondheim, Norway

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Program

Wednesday 18th October

17:00	**Registration opens**
18:00-20:00	**Early-career researcher event** Chairs: Maria Karoline Andersen and Matteo Sangermani, Norwegian University of Science and Technology
18:00	Workshop: "Pressure creates diamonds: How to make stress your friend in academia". Speaker: **Henrik Herrebrøden, Kristiania University College.**
20:00	Walking towards pub through Bakklandet
20:30	Social pub event for early-career researchers at Kieglekroa, Trondheims oldest pub

Thursday 19th October

18:00	**Registration opens**
08:45-10:25	**Welcome and Session 1: Spatial metabolomics** Chair: Tone Frost Bathen, Norwegian University of Science and Technology
08:45 - 09:00	Welcome from local committee and Nordic Metabolomics Society
09:00 - 09:40	**Ron Heeren, Maastricht University** *Spatial Metabolomics: from single cells to translational diagnostics*
09:40 - 09:55	**Maria Karoline Andersen, Norwegian University of Science and Technology** *Optimal storage condition and time of fresh frozen tissue sections prior to spatial metabolite detection with MALDI MSI*
09:55 - 10:10	**Ingela Lanekoff, Uppsala University** *Spatial metabolomics - revealing molecular distributions correlating with disease*
10:10 – 10:25	**Ellen Marie Botne Quinsgaard, Norwegian University of Science and Technology** *Studying metabolic changes during EMT using MALDI MSI*
10:25-11:00	**Break with refreshments**
11:00-13:00	**Session 2: Metabolomics and lifestyle** Chair: Otto Savolainen, Chalmers University of Technology
11:00 – 11:40	**Kati Hanhineva, University of Turku** *Metabolite profiling in food and nutrition research*
11:40 – 11:55	**David Chamoso-Sanchez, Universidad San Pablo-CEU** *Metabotyping the obesity: new factor analysis-based strategies for classifying from multiplatform metabolomics data children with obesity*
11:55 – 12:10	**Samira Prado, Örebro University** *Mapping the effects of plant-based proteins on human metabolic profiling*

12:10 – 12:25	**Sergio Polakof, University of Clermont Auvergne** *Exploring the impact of plant protein vs. animal protein-rich diets in men at cardiometabolic risk: insights from plasma metabolome signatures*
12:25 – 12:40	**Julia Debik, Norwegian University of Science and Technology** *Exploring sources of variation in the female serum metabolome in light of breast cancer risk factors, in healthy participants of the HUNT2 study*
12:40 – 12:55	**Hany Ahmed, University of Turku** *Plasma metabolic profiling shows reversible changes in metabolites linked to psychological traits: A metabolomics study of the effects of alcohol withdrawal in patients with alcohol use disorder*
13:00-14:00	**Lunch**
14:00 - 15:00	**14:00 - 15:00 Session 3 Part I: Microbiome and host metabolism** Chair: Margrét Þorsteinsdóttir, University of Iceland
14:00 – 14:40	**Coral Barbas, Universidad CEU San Pablo** *Analytical Challenges in the Analysis of Microbiota related Metabolites*
14:40 – 15:00	**Santosh Lamichhane, University of Turku** *Gut Microbiome and Novel Bile Acids: New Insights into the Progression to Islet Autoimmunity*
15:00-16:00	**Poster session with refreshments**
16:00-16:45	**Session 3 Part II: Microbiome and host metabolism** Chair: Margrét Þorsteinsdóttir, University of Iceland
16:00-16:15	**Daniel Globisch, Uppsala University** *Chemoselective Metabolomics – New Chemical Biology Tools to Explore Microbiome and Diet Metabolism*
16:15-16:30	**Stefania Noerman, Chalmers University of Technology** *Oral microbiome associates with salivary metabolome and sugars profile*
16:30 – 16:45	**Youngsun Lee, University of Helsinki** *Effect of Fermentation on Sorghum Phenolic Compounds*
16:45	**Serving of small snack**
17:30	**Departure from hotel to Nidarosdomen**
18:00-19:00	**Consert in Nidarosdomen**
19:30	**Conference dinner**

Friday 20th October

07:30	**Running group/morning walk**
08:45-10:25	**Session 4: Computational metabolomics** Chair: Julia Debik, Norwegian University of Science and Technology
08:45 – 09:25	**Johan Westerhuis, University of Amsterdam** *Analysis of longitudinal intervention studies with multivariate metabolomics data*

09:25 – 09:40	**Yingxiao Yan, Chalmers University of Technology** *Adjusting for covariates and assessing modeling fitness in machine learning using MUVR 2.0.*
09:40 – 09:55	**Lu Li, Simula Metropolitan Center for Digital Engineering** *From static to dynamic, how to analyze postprandial metabolomics data?*
09:55 – 10:10	**Maximilian Wess, Norwegian University of Science and Technology** *Registration-based Integration of Spatial Multi-Omics Data for Prostate Cancer Classification*
10:10 – 10:25	**Yannek Nowatzky, Bundesanstalt für Materialforschung und -prüfung (BAM):** *Fragmentation site prediction for non-targeted metabolomics using graph neural networks*
10:25-11:00	**Break with refreshments**
11:00-12:00	**Gold sponsor session** Chair: Daniel Globisch, Uppsala University
11:00 - 11:15	**Cristian De Gobba, Application Specialist, Bruker Nordic** *Bruker 4D-Lipidomics: Exploring the lipidome at the speed of PASEF*
11:15 - 11:30	**Metabolon**
11:30-11:45	**Merck**
11:45-12:40	**Speed-presentations** Chair: Daniel Globisch, Uppsala University
	Alya Ghina Ahram, Norwegian University of Science and Technology *Plasma NMR metabolites of psoriasis and common immune-mediated inflammatory diseases in HUNT and UK Biobank*
	Sisi Deng, University Hospital Tübingen *Quantitative NMR serum spectroscopy deciphers metabolomic and lipidomic heterogeneity in endometriosis and pelvic inflammatory disease*
	Gaute H. Bø, UiT The Arctic University of Norway *Absolute quantification of short-chain fatty acids, organic acids and amino acids in feces using liquid chromatography-mass spectrometry*
	Paula Cuevas-Delgado, Universidad San Pablo-CEU *Untargeted metabolomics sample treatment strategies for renal tissue: a comparative study of solid phase microextraction (SPME) and homogenization-solid liquid extraction (Homo-SLE)*
	Sydney Mwasambu, Uppsala University *Metabolomics Investigation of Colonic Intraluminal Environment*
	Ida Marie Marquart Løber, Aarhus University *Metabolomics-based drug screening – a pilot study*
	Abhibhav Sharma, Norwegian University of Science and Technology *Comprehensive multi-omics analysis of breast cancer reveals distinct prognostic subtypes.*
	Viktor Skantze, Fraunhofer-Chalmers Research Centre for Industrial Mathematics *Analysis and prediction of postprandial metabolic response to multiple dietary challenges using dynamic mode decomposition*

	Sander J.T. Guttorm, University of Oslo *Global LC-MS multi-omics for investigating the effects of High Intensity Training (HIT)*
	Sara Rocha, University of Turku *Metabolic impact of whole grain diets on brain regions in a pig feeding trial*
12:40 -13:15	**Poster session**
13:15-14:00	**Lunch**
14:15-15:40	**Session 5: Clinical metabolomics** Chair: Santosh Lamichane, University of Turku
14:15 - 14:55	**Guro F. Giskeødegård, Norwegian University of Science and Technology** *The metabolic lifespan of breast cancer*
14:55 - 15:10	**Gyuntae Bae, University Hospital Tübingen** *Stratification of ovarian cancer borderline from high-grade serous carcinoma patients by quantitative serum NMR spectroscopy of metabolites, lipoproteins, and inflammatory markers*
15:10 - 15:25	**Zoe Grenville, University of Oxford** *Perturbations in the blood metabolome up to a decade before prostate cancer diagnosis in 4,387 matched case-control sets from the European Prospective Investigation into Cancer and Nutrition*
15:25 - 15:40	**Aidan McGlinchey, Örebro University** *In-utero exposures to per- and polyfluoroalkyl substances and the human fetal liver metabolome: a cross-sectional study*
15:40-16:00	**Awards and goodbye**
16:00-16:30	**Light departure snack available**

3rd Nordic Metabolomics

Conference 2023

Early Career Researcher event

Wednesday, 18th October, 18:00

Pressure creates diamonds:
How to make stress your friend in academia

We keep hearing that stress is bad for us, that it has detrimental effects on our health and well-being. At the same time, every major accomplishment involves stress. Task-related or short-term stress can also help us perform better. But where does the line go, between being stressed in a good way and being stressed in a way that will make you ineffective or even burned out? What are the signals you should look out for, telling you that the stress is getting harmful? This workshop will cover typical stressors in academia and how we may cope with them.

The workshop will be held by Henrik Herrebrøden who is a researcher, sport psychologist, author, and public speaker. He currently holds a position as an Assistant Professor in Psychology at Kristiania University College. His research has mainly focused on cognitive psychology and high-level sports performance. Over the last few years, he has hosted workshops for early career academics on various issues related to performance and mental health in academia. Read more on www.henrikh.no

Following the workshop we will walk through one of Trondheims most iconic city sights, Bakklandet, before we end up at Kieglekroa, Trondheims oldest pub, for the social pub event.

Programme

18:00 – Workshop: "Pressure creates diamonds"
20:00 – Walking towards pub through Bakklandet
20:30 – Social pub event at Kieglekroa, Trondheims oldest pub

We look forward to seeing you at this Early Career Workshop!
Your event organizers,
Matteo Sangermani, Maria K. Andersen & Katharina Herzog

Poster overview

This list will be provided closer to the conference dates – please look back at the NMC2023 web for updates

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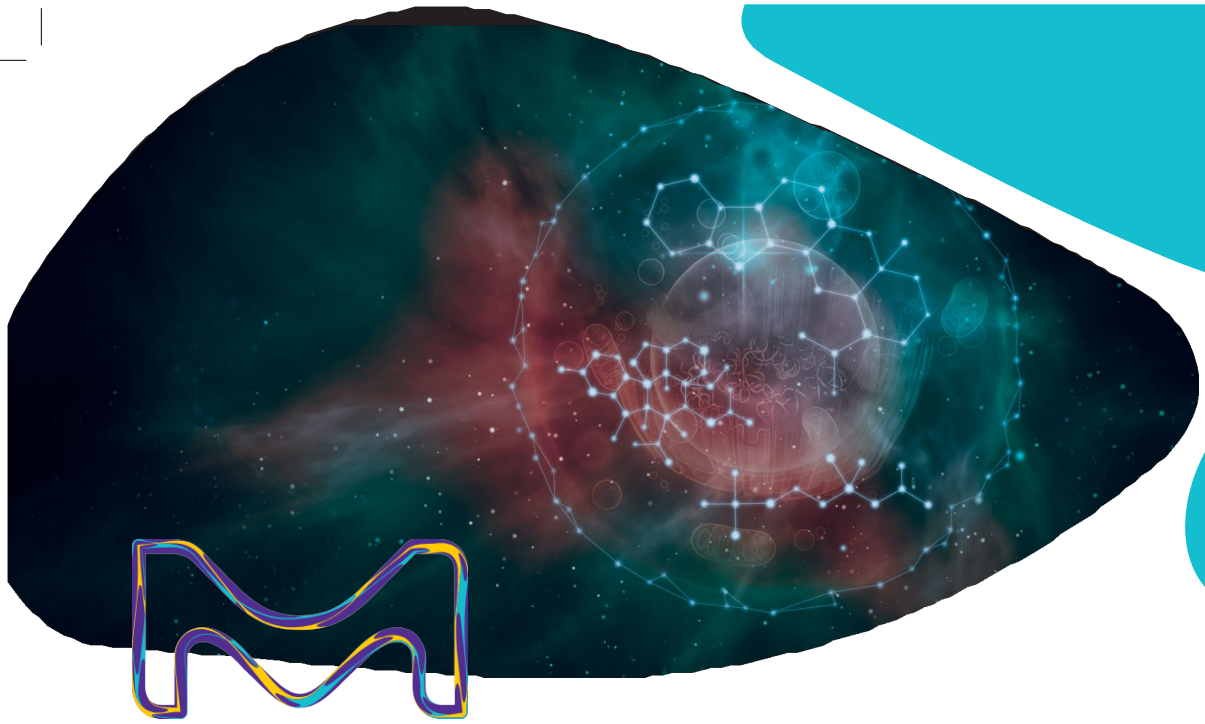

The 3rd Nordic Metabolomics Conference 2023
#NMetC2023

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Practical information

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Conference site
Scandic Nidelven Hotel
Havnegata 1-3
7010 Trondheim

Early researcher's pub event
Kongens gate 30
7012 Trondheim

Organ Concert
Nidarosdomen
Kongsgårdsgata 2
7013 Trondheim

Practical information

Trondheim

https://visittrondheim.no/en/

Transportation

For the travel from Trondheim Airport Værnes, we recommend the following bus-service:

https://www.vaernesekspressen.no/en/

Emergency and contacts

Main organizers:

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Guro: +47 90550347
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