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

Thank you to our sponsors

GOLD Sponsors

BRUKER

MERCK

Metabolon

NTNU HEALTH

SILVER Sponsors

LECO EMPOWERING RESULTS

ThermoFisher SCIENTIFIC

Olink®

CENTRE FOR DIGITAL LIFE NORWAY

Waters THE SCIENCE OF WHAT'S POSSIBLE.™

Bronze Sponsor

afekta TECHNOLOGIES

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

08:00	**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	**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*
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 - 11:45	**Gold sponsor session** Chair: Daniel Globisch, Uppsala University
11:00 - 11:20	**Bruker Nordic, Cristian De Gobba, Application Specialist** *Bruker 4D-Lipidomics: Exploring the lipidome at the speed of PASEF*
11:20 - 11:40	**Metabolon, Natasa Giallourou, Field Metabolomics Scientist** *Validating Small Volume and At-Home Collection Devices for Metabolomics*
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 S. 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

P01	Annotating Unknown PFAS Compounds in Biological Matrices Using Real-Time Library Search and MSn	Brandon Bills, Sunandini Yedla, Ed George, Juan Sanchez, Tim Stratton, Ralf Tautenhahn, Vlad Zabrouskov
P02	*Spatial Characterization of Steroid Hormones in Breast Cancer Tissue by MALDI Mass Spectrometry Imaging*	Feng Wang, Sebastian Krossa, Marco Giampà, Siver Andreas Moestue, Guro F. Giskeødegård, Tone F. Bathen
P03	*Absolute quantification of short-chain fatty acids, organic acids and amino acids in feces using liquid chromatography-mass spectrometry*	Gaute H. Bø, Sietske S. Grijseels, Marie Mardal, Terje Vasskog, Veronika K. Pettersen
P04	*Multi-metabolic signature of controlled modification of dietary carbohydrate quality*	Cecilia Martinez Escobedo, Rikard Landberg, Clemens Wittenbecher
P05	*Urinary phenotyping of acute SARS-CoV-2 infection connects clinical diagnostics with metabolomics and links immune activation to antiviral nucleosides and SIRT1*	Caterina Lonati, Georgy Berezhnoy, Nathan Lawler, Reika Masuda, Aditi Kulkarni, Samuele Sala, Philipp Nitschke, Laimdota Zizmare, Daniele Bucci, Claire Cannet, Hartmut Schäfer, Yogesh Singh, Nicola Gray, Samantha Lodge, Jeremy Nicholson, Uta Merle, Julien Wist, Christoph Trautwein
P06	*The Implications of Mitochondrial DNA in Prostate Cancer Development*	Elen Telumyan, Elise Midtbust, Wei Wang Sebastian Krossa, Maria K. Andersen, Morten Rye Beck, Magnar Bjørås, May-Britt Tessem
P07	*Targeted metabolomic assay for therapeutic drug monitoring in patients with adenine phosphoribosyltransferase deficiency*	Margret Thorsteinsdottir, Unnur A. Thorsteinsdottir, Hrafnhildur L. Runolfsdottir, Finnur F. Eiriksson, Vidar O, Edvardsson, Runolfur Palsson
P08	*Correlating human gut microbiota metabolites and composition in a longitudinal study*	Matteo Sangermani, Solveig M. Jorgensen, Indri Desiati, Tone F. Bathen, Guro F. Giskeødegård
P09	*Untargeted metabolomics sample treatment strategies for renal tissue: a comparative study of solid phase microextraction (SPME) and homogenization-solid liquid extraction (Homo-SLE)*	Paula Cuevas-Delgado, Natalia Warmuzińska, Kamil Łuczykowski, Barbara Bojko, Coral Barbas
P10	*QComics: Recommendations and Guidelines for Robust, Easily Implementable and Reportable Quality Control of Metabolomics Data*	Núria Estanyol-Torres, Álvaro González-Domínguez, Carl Brunius, Rikard Landberg, Raúl González-Domínguez
P11	*Automated sample preparation and analysis of steroid hormones, bile acids, perfluoroalkyls, oxylipins and non-steroidal anti-inflammatory drugs in human plasma using UHPLC-MS/MS*	Samira Salihovic, Tove Slettvoll, Therese Koivula, Alicia Edin, Johan Normark, Matej Orešič, Sara Cajander, Tuulia Hyötyläinen

Poster overview

P12	*Unraveling Lipidomics Complexity: Overcoming False-Positives after Software Assisted Annotation for Building a comprehensive in-house human plasma MS library for Accurate Lipid Annotation*	Sara Martínez, Ana Gradillas, Coral Barbas
P13	*Metabolomics Investigation of Colonic Intraluminal Environment*	Sydney Mwasambu, Weifeng Lin, Daniel Globisch
P14	*CE-MS-based strategy to assess the metabolic signature of testicular cancer in human seminal plasma*	Maricruz Mamami-Huanca, Constanza Fernández-Hernández, Ángeles López-Gonzálvez, Nina Mørup, Francisco J. Rupérez, Antonia García, Serge Rudaz, Serge Nef, Kristian Alsmtrup, Coral Barbas, Víctor González-Ruiz
P15	*Global metabolomics reveals severe 3-nitropropionic acid intoxication in a Norwegian patient*	Hanne Bendiksen Skogvold, Mazyar Yazdani, Elise Mørk Sandås, Anja Østeby Vassli, Erle Kristensen, Dagfinn Haarr, Helge Rootwelt, Katja Benedikte Prestø Elgstøen
P16	*Decontamination of Aflatoxin B1 by Lactic Acid Bacteria*	Jenna Lemmetty, Youngsun Lee, Swantje Bredehorst, Tiina Laitila, Henry N. Maina
P17	*Age-dependent differences in serum metabolites linked to breast cancer risk: A high-resolution mass spectrometry study of pre-diagnostic serum samples from the Norwegian Trøndelag Health Study (HUNT2 study)*	Katarzyna Mrowiec, Agata Kurczyk, Karol Jelonek, Lucyna Ponge, Julia Debik, Guro F. Giskeødegård, Tone F. Bathen, Piotr Widłak
P18	*Spatial multi-omics to uncover prostate cancer heterogeneity*	Maria K. Andersen, Elise Midtbust, Sebastian Krossa, Maximillian Wess, Therese S. Høiem, Christine Aaserød Pedersen, Elen Telumyan, Guro F. Giskeødegård, Morten B. Rye, May-Britt Tessem
P19	*Metabolomic study of metabolites in winter damaged soils that can impact plant growth*	Marit Almvik, Monica Fongen, Pia Heltoft Thomsen, Karin Juul Hesselsøe, Trygve Aamlid
P20	*In silico expansion of the phospholipidome compositional profile and polar metabolome characterization in Haemophilus influenzae Rd KW20 using multiplatform metabolomics and probabilistic modelling*	Miguel Fernández-García, Manuel Ares-Arroyo, Emilia Wedel, Natalia Montero, Coral Barbas, Mª Fernanda Rey-Stolle, Bruno González-Zorn, Antonia Garcí
P21	*Metabolomics-based drug screening – a pilot study*	Ida Marie Marquart Løber, Jørgen Bo Hasselstrøm, Kirstine Lykke Nielsen
P22	*Comprehensive multi-omics analysis of breast cancer reveals distinct prognostic subtypes*	Abhibhav Sharma, Julia Debik, Bjørn Naume, Hege Oma Ohnstad, Oslo Breast Cancer Consortium (OSBREAC), Tone F. Bathen, Guro F. Giskeødegård

Poster overview

P23	*Lipid removal during sample pretreatment - effective ways to reduce matrix effects during HILIC LC-MS analysis of nucleotides and their derivatives*	Adela Pravdova, Ondrej Hodek, Thomas Moritz
P24	*Mass spectral fingerprinting metabolomics – flexible, high throughput metabolomics for sample screening*	Alastair Ross
P25	*Metabolic profiles reflect weight loss maintenance and the composition of diet after very-low-energy diet*	Mari Näätänen, Anna Kårlund, Santtu Mikkonen, Anton Klåvus, Otto Savolainen, Marko Lehtonen, Leila Karhunen, Kati Hanhineva, Marjukka Kolehmainen
P26	*Rapid and efficient LC-MS/MS diagnosis of inherited metabolic disorders: a semi-automated workflow for analysis of organic acids, acylglycines, and acylcarnitines in urine*	Barbora Piskláková, Jaroslava Friedecká, Eliška Ivanovová, Eva Hlídková, Vojtěch Bekárek, Matúš Prídavok, Aleš Kvasnička, Tomáš Adam, David Friedecký
P27	*Quantification of steroids in stool samples using LC-MS*	Ilia Evstafev, Matilda Kråkström, Matej Orešič, Alex M. Dickens
P28	*Metabolomics assessment of colistin induced toxicity*	Ioanna Barla, Ioanna Dagla, Aikaterini Daskalopoulou, Maria Panagiotopoulou, Maria Kritikaki, Panagiotis Dalezis, Nikolaos Thomaidis, Antonis Tsarbopoulos, Dimitris Trafalis, Evagelos Gikas
P29	*LC-MS method development for analysis of vitamins, hormones, and neutransmitter*	Nikola Gabriela Matusevica, Maros Mastrak, Kristaps Klavins
P30	*Serum metabolome profiling in early detection of lung cancer*	Piotr Widłak, Karol Jelonek, Mateusz Smolarz, Agata Kurczyk, Witold Rzyman
P31	*Diet (habitual Western vs Mediterranean) and food type (organic vs conventional) significantly affects different groups of plasma metabolites, a randomized, controlled intervention trial*	*Carlo Leifert, Per Ole Iversen*
P32	*Establishing appropriate levels of internal standards in quantitative targeted metabolomics research: profiling lipid mediators*	Pedro Araujo, Sarah Iqbal, Marit Espe, Elisabeth Holen
P33	*Plasma NMR metabolites of psoriasis and common immune-mediated inflammatory diseases in HUNT and UK Biobank*	Alya Ghina Aqila Arham Abhibhav Sharma, Lavinia Paternoster, George Davey Smith, Bjørn Olav Åsvold, Kristian Hveem, Guro Giskeødegård, Ben Brumpton, Mari Løset

Poster overview

P34	*Quantitative NMR serum spectroscopy deciphers metabolomic and lipidomic heterogeneity in endometriosis and pelvic inflammatory disease*	Sisi Deng, Laimdota Zizmare, André Koch, Lukas Schimunek, Daniele Cefaro, Madhuri Salker, Claire Cannet, Hartmut Schaefer, Yogesh Singh, Jürgen Andress4, Bernhard Krämer, Christoph Trautwein
P35	*Altered plasma metabolite levels can be detected years before a glioma diagnosis*	Sebastian Löding, Ulrika Andersson, Henrik Antti, Benny Björkblom, Beatrice Melin
P36	*Simultaneous Quantitation and Discovery (SQUAD) metabolomics: an intelligent combination of targeted and untargeted workflows in a single injection*	Bashar Amer, Siegrun Mohring, Eugen Damoc, Tabiwang N. Arrey, Jingjing Huang, David Bergen, Rahul Ravi Deshpande, Daniel Hermanson, Vlad Zabrouskov, Susan S. Bird
P37	*High-throughput metabolite exchange across organs provides unique insights to understand underlying metabolic perturbations in progressive obesity and insulin-resistance in minipigs*	Imene Bousahba, Jérémie David, Florence Castelli, Céline Chollet, François Fenaille, Didier Rémond, Nathalie Poupin, Sergio Polakof
P38	*Using labeling probes and isotope tagging for detection and quantification of short chain fatty acids by LCMS in biological samples*	Rikard Fristedt, Rikard Landberg
P39	*Comprehensive plasma steroidomics in patients with different stages of prostate cancer disease*	Sergey Girel, Pavel A. Markin, Elena Tobolkina, Julien Boccard, Natalia E. Moskaleva , Serge Rudaz, Svetlana A. Appolonova
P40	*Analysis and prediction of postprandial metabolic response to multiple dietary challenges using dynamic mode decomposition*	Viktor Skantze, Mats Jirstrand, Carl Brunius, Ann-Sofie Sandberg, Rikard Landberg, Mikael Wallman
P41	*Unraveling the chemical ecology of successful monoculture farming in termites using LC-MS metabolomics*	Nanna Hjort Vidkjær, Suzanne Schmidt, Erin Cole, Christine Beemelmanns, Michael Poulsen
P42	*Metabolic biomarkers on the surface of cutaneous melanoma*	Skaidre Jankovskaja, Peter Spégel, Johan Engblom, Kari Nielsen, Gustav Christensen, Chris Anderson, Tautgirdas Ruzgas
P43	*Biochemical composition of soy-based meat alternatives examined using non-targeted metabolomics approaches*	Jasmin Raita, Hany Ahmed, Kang Chen, Ville Koistinen, Kati Hanhineva
P44	*Understanding the role of matrix polysaccharides of cell wall in altering aspen cuticle chemistry integrating mass spectrometry with multivariate tools*	Madhusree Mitra, Hans Stenlund, Annika I. Johansson, Marta Derba-Maceluch, Ewa J. Mellerowicz

Poster overview

P45	*Chloroplastic ascorbate level may regulate arginine metabolism through ascorbate – protein interactions*	Roland Tengölics, Dávid Tóth, Fayezeh Aarabi, Anna Karlsson, André Vidal-Meireles, László Kovács, Soujanya Kuntam, Tímea Körmöczi, Alisdair R. Fernie, Elton P. Hudson, Balázs Papp, Szilvia Z. Tóth
P46	*Global LC-MS multi-omics for investigating the effects of High Intensity Training (HIT)*	Sander J.T. Guttorm, Maria T.K.T Nguyen, Nurtene Dernjani, Elise M. Sandås, Hanne B. Skogvold, Mazyar Yazdani, Helge Rootwelt, Per Ola Rønning, Steven R.H. Wilson, Katja B.P. Elgstøe
P47	*Clinical metabolomics and lipidomics: what we have done and where we are going*	David Friedecký, Aleš Kvasnička, Dana Doběšová, Barbora Piskláková, Eliška Ivanovová
P48	*Metagenomic study of the human gut microbiome*	Indri Desiati, Tone F. Bathen, Guro F. Giskeødegård, Matteo Sangermani
P49	*Network analysis reveals systematic alterations in lipidome profiles in early-onset hyperuricemia, gout, and the effect of urate-lowering treatment*	Aleš Kvasnička, David Friedecký, Radana Brumarová, Markéta Pavlíková, Kateřina Pavelcová, Jana Mašínová, Lenka Hasíková, Jakub Závada, Karel Pavelka, Pavel Ješina, Blanka Stibůrková
P50	*Metabolic impact of whole grain diets on brain regions in a pig feeding trial*	Sara Rocha, Topi Meuronen, Retu Haikonen, Anna Kårlund, Joseph F Urban Jr., Gloria Solano-Aguilar, Olli Kärkkäinen4, Kati Hanhineva
P51	*An integrated understanding of the metabolic benefits of a novel double-targeted intervention using genetically engineered probiotic expressing aldafermin with dietary changes on NAFLD*	Ambrin Farizah Babu, Valeria Iannone, Johnson Lok, Carlos Gomez-Gallego, Giuseppe D''Auria, Ruben Vazquez-Uribe, Troels Holger Vaaben, Mareike Bongers, Santtu Mikkonen, Maija Vaittinen, Ida Tikkanen, Mikko Kettunen, Anton Klåvus, Ratika Sehgal, Dorota Kaminska, Jussi Pihlajamaki, Hani El-Nezami, Morten Otto Alexander Sommer, Marjukka Kolehmainen, Kati Hanhineva
P52	*Spatial multiomics show lipid metabolism alterations in prostate cancer*	Maria K. Andersen, Elise Midtbust, Sebastian Krossa, Trond Viset, Øystein Størkersen, Michiel Vandenbosch, Britt S.R Claes, Marco Giampà, Therese S. Høiem, Ron M.A Heeren, Guro F. Giskeødegård, Morten B. Rye, May-Britt Tessem
P53	*The optimization of the endocannabinoids' measurement method for LC-MS*	Katarzyna Miniewska, Matilda Kråkström, Ilia Evstafev, Tukka Rönko, Tuomas Lindeman, Tuulia Hyötyläinen, Matej Oresic, Alex Dickens

Poster overview

P54	*Reproducibility and Data Pooling for large scale studirs – A Interlaboratory comparison of metabolomics analyses of plasma using biocrates kit technology*	Jerzy Adamski, Gözde Ertürk Zararsiz, Gabi Kastenmüller, Jiamin Zheng, Rupasri Mandal, Lisa St. John-Williams, Kendra Adams, J. Will Thompson, Michael P. Synder, Kevin Conterpois, Songije Chen, adia Ashrafi, Sumeyya Akyol, Alexander Cecil, Ali Yilmaz, Stewart Graham, Thomas M. O`Connell, Teodoro Bottiglieri, Karel Kalecky, Tuan Hai Pham, Jerzy Adamski, Therese Koal, Jutta Lintelmann, Dernot Poschet, Jennifer Kirwan, Sven Schuchardt, Xue Li Guan, Daisuke Saigusa, David Wishart
P55	*Circulating lipoprotein subfractions and microRNAs as potential biomarkers for improved risk prediction of myocardial infarction: the HUNT study*	Julie Caroline Sæther, Marie Klevjer, Guro Fanneløb Giskeødegård, Tone Frost Bathen, Bruna Gigante, Turid Follestad, Helge Rørvik Røsjø, Torbjørn Omland, Erik Madssen, Anja Bye
P56	*Immobilized Enzymes on Magnetic Beads for Separate Mass Spectrometric Investigation of Human Phase II Metabolite Classes*	Ioanna Tsiara, Amelie Riemer, Mario S.P. Correia, Ana Rodriguez Mateos, Daniel Globisch
P57	*Comparison of serum metabolome profiles of four types of solid cancers by MS and NMR approaches*	Katarzyna Mrowiec, Julia Debik, Karol Jelonek, Agata Kurczyk, Lucyna Ponge, Guro F. Giskeødegård, Tone F. Bathen, Piotr Widłak
P58	*Biochemical profiling of porcine burn wound healing following treatment with acellular skin grafts*	Óttar Rolfsson, Aristotelis Kotronoulas, Christian Christiansen, Adrian Lopez Garcia de Lomana Giorgios Stamatakis, Marieke Heijink, Martin Giera, Martina Samiotaki, Himar Kjartansson, Randolph Stone II
P59	*Integration of proteomics and metabolomics data in a case-control study of Graves disease*	Arve Ulvik, Klaus Meyer, Johnny Laupsa Borge, Hans Olav Ueland
P60	*Longitudinal associations of sleep duration, vitamin D, and grain intake with serum fatty amides measured by LC-MS from childhood to adolescence*	Iman Zarei, Darren R. Healy, Sonja Soininen, Aino-Maija Eloranta, Marko Lehtonen, Marjukka Kolehmainen, Timo A. Lakka, Kati Hanhineva
P61	*Isotope-guided metabolomics dissects kidney arginine metabolism*	Maria Chrysopoulou, Johannes Jägers, Markus Bleich, Nina Himmerkus, Markus Rinschen
P62	*Analysis of biological samples by fast HILIC separations of nucleotides, and RPLC separation of 3-NPH derivatized carboxylic acids with LC-MS/MS*	Ondrej Hodek, Adela Pravdova, Thomas Moritz

Poster overview

P63	*Dynamics of gut metabolome and microbiome maturation during early life*	Anna-Katariina Aatsinki, Santosh Lamichhane, Heidi Isokääntä, Partho Sen, Matilda Kråkström, Marina Amaral Alves, Anniina Keskitalo, Eveliina Munukka, Hasse Karlsson, Laura Perasto, Minna Lukkarinen, Matej Oresic, Henna-Maria Kailanto, Linnea Karlsson, Leo Lahti, Alex M Dickens
P64	*Multi-omics fingerprint of in vitro bioengineered heart-on-chip platform*	Ilaria Gisone, Maria Guirro, Lorena García, Nerea Abasolo, Federico Vocci, Núria Canela, Salvador Fernández-Arroyo
P65	Metabolite changes during curative treatment of Prostate Cancer	Kristina Lundquist, Camilla Thellenberg-Karlsson, Henrik Antti
P66	*An integrated molecular networking based non-targeted PFAS analysis workflow enables the identification of novel targets in NIST plasma*	Juan Moises Sanchez, Marynka Ulaszewska, Ralf Tautenhahn
P67	*Effects of FODMAPs and gluten on irritable bowel syndrome, from self-reported symptoms to molecular profiling*	Elise Nordina, Per M. Hellströmb, Rikard Landberga, Carl Bruniusa
P68	*Global metabolomics and lipidomics in a university hospital setting*	Katja B Prestø Elgstøen, Hanne B. Skogvold, Sander J.T. Guttorm, Mazyar Yazdani, Elise Sandås Sand, Helge Rootwelt
P69	*Metabolomic and lipidomic approaches in mindfulness-based intervention for health-care students*	Isabel Meister, Sergey Girel, Izadora Furlani, Claire Holman, Françoise Jermann, Julien Boccard, Camille Piguet, Serge Rudaz
P70	*A quantitative method for analysis of the oat specific compounds avenanthramides and avenacosides in human plasma samples*	Marina Armeni, Rikard Fridstedt, Otto Savolainen, Rikard Landberg
P71	*Combining real time and post-acquisition quality control (QC) for metabolomics workflows*	Aiko Barsch, Patrick Groos, Nikolas Kessler, Matthias Szesny, Sven W. Meyer, Ilmari Krebs, Heiko Neuweger, Matthew R. Lewis, Cristian De Gobba
P72	*Non-targeted metabolomics of urine to characterize benign and malignant canine mammary cancer subtypes*	Robin Moore, Alessandra Estrela-Lima, Olli Kärkkäinen, Soile Turunen, Anna Hielm-Björkman

TIMS-MS

timsTOF Series

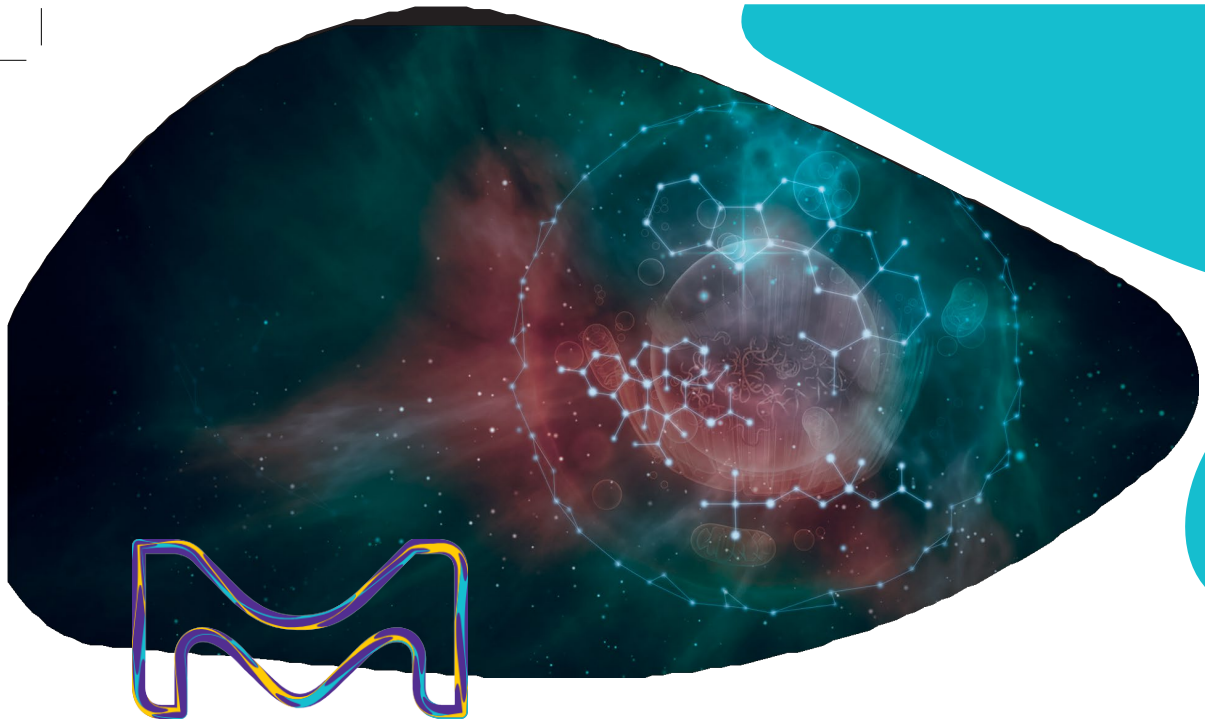
Next generation timsTOF platforms for high-throughput, high-speed and high-sensitivity 4D-Proteomics™, 4D-Multiomics and SpatialOMx®

Defy the odds with the timsTOF. Introducing the next generation of ion mobility mass spectrometry. Utilizing trapped ion mobility spectrometry (TIMS) unlocks an additional dimension of separation and delivers revolutionary improvements in enhanced specificity and robustness.

- **timsTOF Ultra** – Make the invisible visible – Navigate the unknown with precision and accuracy using PASEF®
- **timsTOF SCP** – Cell by cell: proteomics takes on new meaning with timsTOF
- **timsTOF HT** – Expanding the capabilities of depth and high-throughput 4D-Proteomics
- **timsTOF Pro 2** – The platform of choice for 4D-Multiomics applications with its proven robustness, high sensitivity and fast MS/MS acquisition
- **timsTOF fleX** – With **MALDI-2** and **microGRID** towards enhanced sensitivity at high spatial resolution
- **timsTOF MALDI PharmaPulse®** – Taking label-free high-throughput screening to the next level

For Research Use Only. Not for use in clinical diagnostic procedures.

For more information please visit www.bruker.com



The 3rd Nordic Metabolomics Conference 2023
#NMetC2023

Metabolomics from Merck

Description	Discount
Analytical Standards	
Mass Spectrometry Metabolite Library	10%
Biomarkers and Metabolomics Standards	10%
LC-MS Grade Solvents	
Acetonitrile	40%
Methanol	40%
Water	40%
Water with 0.1% (v/v) Formic acid	40%
Columns	
SeQuant® HILIC	15%
Supel™ Carbon	22%
Ascentis ® Express C18	35%
Bioactive Small Molecules	
Cytokines & Growth Factors Research	15%
Cyclic Nucleotides	15%
Neuroscience	15%
Kinase Phosphatase Biology	15%
Immunology Research	15%
Compound Libraries	
Lopac 1280	10%
Solid Phase Extraction	
HybridSPE®-Phospholipid Technology	25%
HLB SPE Tubes and 96-well Plates	25%
SCX SPE Tubes and 96-well Plates	25%
Vials & Caps	
QSertVial™ 0.3ml Vial fused insert with Cap	30%
Certified 2ml Vials & Caps with Pre-Slit	30%
Certified 0.25ml Glass Inserts	30%

Supelco® products Sigma-Aldrich® products

Merck is proud to provide tools and resources that enable breakthrough discoveries to be made more quickly, confidently, and accurately. Sigma-Aldrich's scientific expertise and knowledge spans the entire Metabolomics range.

From our Metabolomics Core Partnership, to our innovative products, we continue to develop our Metabolomics product offering to suit the needs of an ever-developing research area.

Our vast portfolio of products and knowledge base of Metabolomics, includes area such as:

- Mass Spec Metabolite Library
- Bioactive Small Molecules
- Chromatography Columns and SPE specific to Metabolomics applications
- Our alliance with the IUBMB enabling us to feature the Nicholson Metabolic Pathway Charts and Animations

Please contact your Scientific Sales Specialist for more information:

Chris Bedward

chris.bedward@merckgroup.com

0044 7813 451 083

Supelco® Analytical Products Sigma-Aldrich® Lab & Production Materials Millipore® Preparation, Separation, Filtration & Monitoring Products

The Life Science business of Merck operates as MilliporeSigma in the U.S. and Canada.

Practical information

Addresses

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:

Tone: +47 95021097
Guro: +47 90550347
Julia: +47 41617861