MetaboNews

March 2023 Vol 13, Issue 3

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The MetaboNews Team

The Metabolomics Innovation Centre metabolomics.innovation@gmail.com http://www.metabonews.ca/archive.html





MetaboNews is a monthly newsletter published in a partnership between The Metabolomics Innovation Centre (TMIC) and the Metabolomics Society.

Metabolomics Society News

Conference Corner



Metabolomics 2023 - Niagara Falls, Canada, June 18-22

The 19th Annual Conference of the Metabolomics Society will be held at the Niagara Falls Convention Centre in Niagara Falls, Canada from June 18-22, 2023. Registrations and abstract submissions are open with a poster abstract deadline of May 16, 2023 and early-bird registration ending on **April 3, 2023**. As one of North America's most popular family vacation destinations, home to important historical sites, charming villages, and award-winning wineries, Niagara Falls and the surrounding Niagara region offer an ideal location to host this conference with convenient access to airports in Toronto or Hamilton (Ontario), and Buffalo (New York). The conference themes include recent technology advances in metabolomics, computational metabolomics, statistics, and bioinformatics, metabolomic applications in health and disease, as well as metabolomic studies of plants, food, environment, and microbes. We are excited to announce 12 pre-conference workshops (Figure 1) to complement three parallel scientific sessions and various engaging evening social events. Registration for workshops is now open!

TECHNOLOGY

- Ion mobility-MS workflows
- Emergent technologies in NMR metabolomics
- Multi-platform metabolomics workflows: GC-MS
- The future potential of metabolomics for illuminating the molecular dark matter of soil

BIOINFORMATICS

- MetaboAnalyst 5.0 Part I and II
- Data standardization through re-use of public repositories
- Data preprocessing – best practices and pitfalls

HEALTH

- Biomarker discovery, pathway enrichment analysis, and metaanalysis
- Using metadata to inform metabolomics data analysis
- Metabolomic epidemiology – pathway to clinical translation

COMMUNITY

- EMN Career development
- Moving towards consensus – Best QA/QC Practices

Figure 1. Planned pre-conference workshops at Metabolomics 2023 in Niagara Falls.

March 2023 Metabolomics Society News



The Metabolomics Society is an independent, non-profit organization dedicated to promoting the growth, use, and understanding of metabolomics in the life sciences.

General Enquiries
info@metabolomicssociety.org

Membership Enquiries
membership@metabolomicssociety.org

The conference website includes a tentative agenda, details on visa requirements, travel directions to Niagara Falls, and hotel accommodations – most within a short walking distance to the conference centre, the entertainment district of Clifton Hill, and the majestic Horseshoe Falls! Please book your hotel reservations as soon as possible using the links provided on our conference website as summer is a busy time for tourism in Niagara Falls.

For more information and regular updates please visit https://www.metabolomics2023.org/

We look forward to welcoming you in Niagara Falls this summer!

Final Call for a Home - Metabolomics 2025

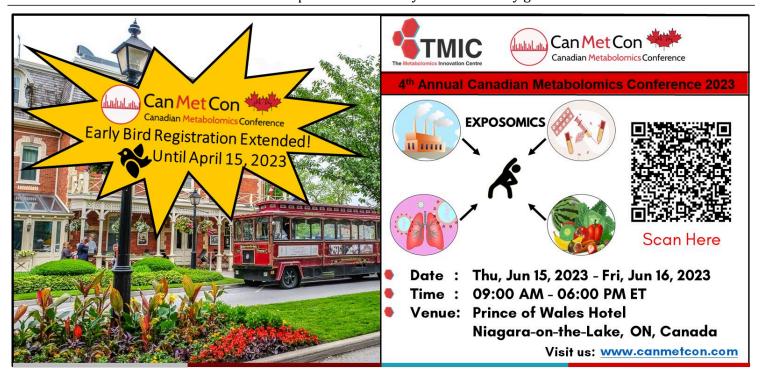
Help us determine an exciting place to host the 2025 conference, which will rotate to Europe/Africa/Middle East. Click here to fill out the simple form with your suggestion before March 31.

Members Corner

Board of Directors

Dear Society Members,

I hope this finds you, your family, and your friends well. One of the exciting aspects of our society is that it is truly global. Metabolomics as a science



<u>Early-bird registration</u> for the 4th Annual Canadian Metabolomics Conference (CanMetCon) 2023 is extended until April 15. Secure your spot at a discounted price of \$150 CAD for students and \$250 CAD for all others. <u>Abstract Submission</u> is open until March 31. Our list of <u>invited speakers</u> is now available!



reaches many application areas in many different subjects and the Metabolomics Society interacts with many different countries. If you're having déjà vu then you are correct in that I have said something similar before, but there is a reason for raising this again.

One of our missions is to promote the growth and development of the field of metabolomics internationally. In order to facilitate this international pursuit, we have relationships with several metabolomics groupings across the globe. These groups include national networks, societies, associations, and centers and we call these International Affiliates. You may be interested to know that in the last month, we have mutually agreed to continue our affiliation with MANA (Metabolomics Association of North America) which has been mutually beneficial. We are also in discussion with several other groupings.

There are multiple benefits to being an International Affiliate of the Metabolomics Society. The most important is that we work together to advance and promote the development, adoption, and application of metabolomics approaches in scientific research. We hope that these relationships will enhance both parties' effectiveness and promote public awareness of one another's research outputs. These include things like primary papers and reviews, metabolomics-focused services as well as electronic information and resources. We also hope that we can communicate on the planning of conferences to maximize synergies and advertising. There is a small budget for affiliates which is targeted at helping affiliates organize meetings, workshops, or training events within their home country, which we hope will also help promote the activities of the Metabolomics Society. More details of our current International Affiliates are found here.

At the moment, we are reaching out to our current International Affiliates to continue to renew our relationships. If you are in a country or region where there is no current association with the society, and your group wishes to investigate a possible affiliation with us then please reach out to Fabien Jourdan who is

the Chair of the International Affiliations Task Group (his email address is

secretary@metabolomicssociety.org).

In other news, many thanks to those of you who have nominated metabolomers for our three awards – Honorary Fellows – The Metabolomics Society Medal – The President's Award – we have had lots of fantastic scientists nominated. It will be particularly tough to choose the winners and you'll have to wait until Niagara Falls to learn of the outcomes. There will be no spoilers here!

Finally, it is often thought that the British are obsessed by the weather, and living in the North West of the UK brings its fair share of inclement weather, so perhaps I am. The UK has been particularly cold this winter and as a sunseeker, I am looking forward to the summer and to the Summer Solstice, which this year I will be celebrating in Canada. I hope like me, your plans to travel to Metabolomics 2023 are coming to fruition and I hope to see many of you F2F in June. Gwela i chi! or as Fabien may say "À bientôt!"

All the very best.

Roy Goodacre, University of Liverpool, UK President, Metabolomics Society

Early-career Members Network (EMN)

Career Night

The Metabolomics Society is excited to announce the third Career Night at the 19th International Conference in Niagara Falls. The event will be divided into two parts through a job fair and interactive round table discussions (More info:

https://www.metabolomics2023.org/evening-events).

For the job fair, both industry and academic employers are encouraged to sign up for a table, including academic employers with postdoctoral position openings. If you are interested, sign up here. Tables are free but available on a first-come basis.



International Affiliates' Corner

Metabolomics Association of North America (MANA)

Visit https://metabolomicsna.org



Does NMR metabolomics peak your interest?

The MANA Nuclear Magnetic Resonance interest group consists of a community of scientists with mutual interests in NMR metabolomics.

We aim to:

- Promote the application of NMR in the currently MS emphasized metabolomics
 world
- . Provide NMR metabolomics training resources to the broader community.
- Build community consensus, develop best-practices, and advance NMR metabolomics methods.

If you are interested contact us at nmr@metabolomicsna.org

For more information: https://tinyurl.com/3f3edzyp

Polish Society of Metabolomics

Visit https://ptmet.pl/





The Polish Society of Metabolomics, in collaboration with Bruker, invites you to a webinar entitled "Expanding the Horizons of 4D-Metabolomics™ and 4D-Lipidomics™". The

webinar will be held online on April 27th, 2023 at 2 p.m. (CET). A detailed agenda and registration link will be available soon on the webpage.

Attendance is free, but registration is required. For more information, please visit our website. We cordially invite anyone interested to attend.



Latest news and insights in metabolomics



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Nightingale Health offers next-generation clinical chemistry for research. One 100 μ l blood sample, one test, 250 biomarkers, including 39 clinically validated biomarkers. Replicate and publish your research findings, adding to over 450 prior publications from UK Biobank and hundreds of other cohorts. Enjoy our affordable pricing from EUR 19 per sample.

Come meet us at the following events:

ESC Preventive Cardiology Congress, 13 April – 15 April, Malaga London Metabolomics Network Meeting, 21 April, London European Atherosclerosis Society Congress, 21 May – 24 May, Mannheim The European Human Genetics Conference, 10 June – 13 June, Glasgow

Want to learn more?

Email us:

research@nightingalehealth.com

Sign up to our newsletter:

https://ngh.site/researchnewsletter



research.nightingalehealth.com



Note from the MetaboNews Editor

Dear valued readers of MetaboNews,

I hope this letter finds you well. As the operations manager of The Metabolomics Innovation Centre (TMIC) and editor of MetaboNews, I wanted to take a moment to express my gratitude for your continued support and interest in our coverage of developments and research in the field of metabolomics, and would also like to take the opportunity to share some, well, MetaboNews News.

As we continue to grow and evolve as a publication, we are excited to announce that we will be transitioning to a new newsletter format starting next month, in April 2023. Our new format will feature a fresh design and layout, with quite a few changes on the back-end to streamline our approach to delivering you the latest metabolomics news, insights, publications, and career opportunities.

To ensure that you continue to receive MetaboNews, we ask that you monitor your email preferences and check your spam folder next month. We will send out a reminder on publication day next month using this listserv as well. This will help us ensure that our newsletter reaches you promptly and reliably.

Once again, we would like to express our sincere thanks to all of our readers for your ongoing support. We look forward to continuing to serve as your trusted source for the latest news and insights in metabolomics.

Sincerely,
Michael Lowings
Editor, MetaboNews



International Women's Day

This March, in honour of International Women's Day, we want to celebrate the countless women making contributions to scientific fields, particularly in metabolomics. There are many we could name, including Sastia Putri (profiled below), Dajana Vuckovic, who has just won the 2023 Fred Beamish Award from the Canadian Society for Chemistry, and Caroline Johnson, who recently received the 2023 WomiX Mentorship Award. We would also like to take a moment to celebrate all of the emerging women whose names we do not yet know - the stand-out undergrads, the early career graduate students, the clinicians whose protocols are not yet receiving the attention they deserve.

At TMIC, we're working to support women's contributions to metabolomics by intentionally recruiting women to our governance and science advisory committees, working to design professional development programming that addresses the particular challenges of women in academic science, and having our senior staff participate in EDI-focused leadership training. We would encourage all of our readers to take some time this month to read a paper published by one of their female colleagues so that the work of these outstanding scientists is better known in the field overall.

MARCH WOMEN'S DAY

Happy International Women's Day!



Sastia Putri



Associate Professor Department of Biotechnology Graduate School of Engineering Osaka University

Research Map

Biography

Sastia Putri is an Associate Professor at the Department of Biotechnology, Graduate School of Engineering, Osaka University. Sastia received her B.Sc. degree in 2004 from Bandung Institute of Technology Indonesia, M.Eng. and Ph.D. degree in 2008 and 2010 from Osaka University, respectively. Her research field is the application of metabolomics for food science and microbiology. She won the L'Oreal Award for women in science in 2015 for her work on coffee metabolomics, the Osaka University award in 2018, the Metabolomics Society President's

award in 2020 for her significant contribution to the Metabolomics Society and the field of metabolomics, and the Saito Award 2022 from the Society for Biotechnology Japan. She was the founding Chair of the Early career members network (EMN) of the Metabolomics Society and was a member of the BOD of the Metabolomics Society from 2013-2019.

Interview Q&A

How did you get involved in metabolomics?

I first got involved in metabolomics when I joined Prof. Eiichiro Fukusaki's lab as a postdoc. At that time, I worked on a project to apply metabolomics for microbial strain improvement. It was exciting to work closely with metabolic engineers and demonstrate the utility of metabolomics as one of the important tools in metabolic engineering and synthetic biology.

What are some of the most exciting aspects of your work in metabolomics?

When I started working in metabolomics, most of the research in metabolomics was on the discrimination of different microbial strains having different phenotypes. It was still quite challenging to use the information gleaned from metabolomics research to actually improve a biological system.

It was very exciting when we were able to improve microbial strains for the production of useful chemicals using metabolomics for the first time. It was also exciting when I tried to combine metabolomics with other scientific disciplines like nutritional epidemiology. [A typical flow of metabolomics work that leads to inputs for strain improvement is shown in Figure 1]



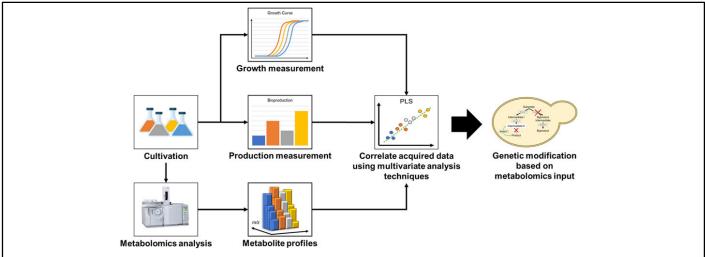


Figure 1. Metabolomics-driven strain improvement workflow.

Source: Iman MN, Herawati E, Fukusaki E, Putri SP. Metabolomics-driven strain improvement: A mini review. Front Mol Biosci. 2022 Nov 9;9:1057709. doi: 10.3389/fmolb.2022.1057709

What key metabolomics initiatives are you pursuing at your research centre or institute?

I am now mostly doing metabolomics research using GC-MS to improve the sensorial quality and nutritional quality of tropical bioproducts. We aim to apply metabolomics to reduce food loss, improve nutrition and identify unique characteristics in relatively underexplored bioresources from Indonesia for product development.

What is happening in your country in terms of metabolomics?

There are quite many active researches on metabolomics happening in Japan. And many Japanese researchers work on diverse applications of metabolomics, including clinical, environmental, plant, and food. There are researchers working on the bioinformatics side and the development of data analysis tools.

I am originally from Indonesia and I work with several researchers in Indonesia who are interested to apply metabolomics as well as with those who are developing metabolomics capabilities in Indonesia.

How do you see your work in metabolomics being applied today or in the future?

I am now working on bridging food metabolomics with

nutritional epidemiology to unravel hidden health benefits in food. It's an exciting new application of metabolomics and may open new research possibilities to improve our food's nutritional quality.

As you see it, what are metabolomics' greatest strengths?

Metabolomics has a very close association with the phenotype of a given organism and therefore, we can discuss many phenotypic features based on the metabolome.

As it captures global information on metabolites, one can have a comprehensive snapshot and generate useful hypotheses for the future researcher. In other words, it's a very powerful hypothesis generator.

What do you see as the greatest barriers for metabolomics?

I think the main challenge is still in our ability to annotate metabolites. The more metabolites we can annotate, the more powerful and more in-depth our discussion will be. Improving metabolite coverage will provide a more comprehensive overview of the metabolite state of an organism. Although metabolomics has been proven to be a powerful hypothesis generator, we are still facing challenges in translating this into impactful outcomes.



What improvements, technological or otherwise, need to take place for metabolomics to really take off?

Development of more sophisticated analytical methodologies to increase metabolite coverage and improve the pipeline of data analysis. Integration with other scientific disciplines can open new collaborations and new insights. We need to also improve true identification by developing comprehensive metabolite libraries. Pathway interpretation and translational purposes also require better quantification accuracy and this is also still lacking in many metabolomics studies.

How does the future look in terms of funding for metabolomics?

In the past, it was relatively possible to acquire grants for exploratory research using metabolomics. In the future, a clear utility of metabolomics to elucidate new biological mechanisms or develop new products or impactful translational research would be essential to get funding.

What role can metabolomics standards play?

It is really important to ensure data quality and reproducibility of data generated in metabolomics research. As the number of users increase significantly in the past year, it is becoming more and more necessary to enforce the standardization of methodologies used in metabolomics research.

Do you have any other comments that you wish to share about metabolomics?

Metabolomics will continue to be an indispensable approach in various disciplines of life sciences. I hope we as a community will continue to work together to bring metabolomics forward and use it for impactful research, but at the same time develop this method further so it will be inexpensive and accessible for researchers around the globe.



Sastia and her team celebrate their hard work and success with bright smiles all around! Check out their work in metabolomics and natural products here.



Recognition for her research in metabolic engineering and food technology

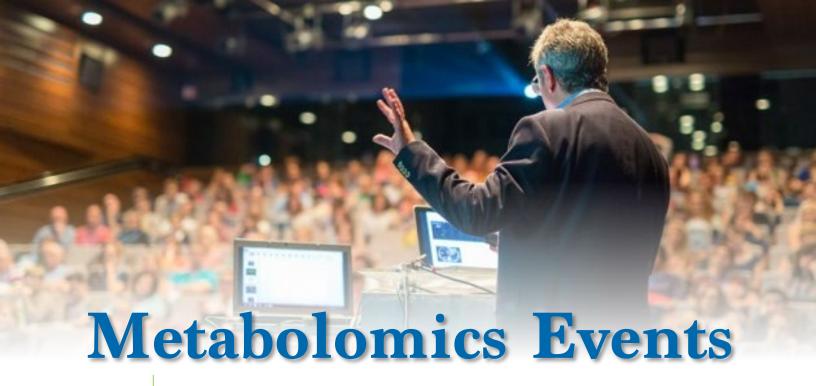


Recent Publications

Recently published papers in metabolomics

- Review: Advancing CAR T cell therapy through the use of multidimensional omics data
- Review: Multi-omics approaches to study platelet mechanisms (Open access)
- Review: The need for an integrated multi-OMICs approach in microbiome science in the food system
- Review: Towards multiomic analysis of oral mucosal pathologies (Open access)
- <u>Discovery-Based Proteomics Identify Skeletal Muscle Mitochondrial Alterations as an Early Metabolic Defectin a Mouse Model of β-Thalassemia</u> (Open access)
- <u>Dynamic Metabolic Signatures of Choline and Carnitine across Healthy Pregnancy and in Cord Blood:</u>
 Association with Maternal Dietary Protein
- <u>Indoor microbiome, microbial and plant metabolites, chemical compounds, and asthma symptoms in junior</u> high school students: a multicentre association study in Malaysia
- <u>Integrative genetics-metabolomics analysis of infant bronchiolitis-childhood asthma link: A multicenter prospective study (Open access)</u>
- <u>Lipidomic Profiling of Colorectal Lesions for Real-Time Tissue Recognition and Risk-Stratification Using Rapid Evaporative Ionization Mass Spectrometry</u>
- <u>Machine learning of plasma metabolome identifies biomarker panels for metabolic syndrome: findings from the China Suboptimal Health Cohort (Open access)</u>
- Maternal exposure to polystyrene microplastics alters placental metabolism in mice
- <u>Microbiome composition modulates secondary metabolism in a multispecies bacterial community</u> (Open access)
- Multi-omics profiling visualizes dynamics of cardiac development and functions (Open access)
- Rapid metabolomic screening of cancer cells via high-throughput static droplet microfluidics
- <u>Stable isotope-based metabolic flux analysis: A robust tool for revealing toxicity pathways of emerging contaminants</u>
- <u>Transcriptomic and metabolomic analysis reveals a protein module involved in preharvest apple peel</u> browning
- Untargeted plasma 1H NMR-Based metabolomic profiling in different stages of chronic kidney disease





April 2 – 7, 2023

MSACL 2023 13th Annual Conference & Exhibits

Venue: Monterey, CA, USA

Learn More Here

Overview

MSACL is focused on providing a forum of interaction for participants in all stages of the development, advancement and use of analytical tools, including data analytics, in the clinic to improve patient care. In the past MSACL has had specific tracks for each -omic topic area. For 2023, they are planning to focus on plenary sessions with panel discussions that bring the community together, in addition to parallel sessions on focused topics. Registration is still open.

April 11, 2023

MANA SODAMeet Venue: Online Learn More Here

Overview

The goal of SODA is to provide a community-driven resource of actively-maintained software, test datasets used for software benchmarking, and results produced by software. SODAMeetsis a platform where data generators and computational scientists can share their use of software/data. During SODAMeets (every 2 months), two speakers will present on software or data they would like to share with the community, emphasizing how these software/data are used. Speakers will be requested to fill out a form on our SODA website so that we collect relevant information on these software/data presented.



April 24 – 28, 2023

Hands-on NMR Spectroscopy for Metabolic Profiling course

Venue: Hammersmith Campus, Imperial College London

Learn More Here

Overview

This week-long course will describe from both theoretical and practical point of views, how to carry on an NMR based metabolic profiling project. It will cover study design, sample preparation, NMR spectrometer set up, quality control, data analysis, and metabolite identification.

Each day focuses on one of the aspects of metabolic profiling and it also includes a case study to help you think of pros and cons of potential projects and aspects to consider when applying for funding.

For more information and to register, click <u>here</u>.

April 27, 2023

Bits & Bites # 03: Mass Spectrometry Imaging 101: Sample Preparation

New course
Venue: Online
Learn More Here

Overview

This 9-part short course series will feature in-depth topics in untargeted metabolomics. Each short course can be taken individually or you can select multiple Bites. You will gain a deeper insight into current software, methods, and pitfalls. Each session starts promptly at 9 a.m. (Pacific Time) and will take approximately 4 hours. The courses will be conducted in highly interactive manner, with use of freely available software and databases. The tuition is \$175.

This 3rd course is taught by Dr. Elizabeth Neumann from UC Davis, and no prior knowledge or software is required. Short description of the course: Have you ever looked at some mass spectrometry images and thought: "That is so cool! Can I do that?" Yes. Yes, you can! In this short course, we will cover the basics of sample preparation for mass spectrometry imaging analysis. We will start from the tissue and move all the way through the start of the data acquisition. This short course will include a mixture of video, PowerPoint content, and group discussion. By the end of the course, every researcher will have enough knowledge to start their own mass spectrometry imaging journey.



May 23 – 26, 2023

NMR Metabolomics Workshop Venue: UGA Athens, GA Learn More Here

Overview

The workshop is sponsored by the NSF-funded Network for Advanced NMR and by the Complex Carbohydrate Research Center NMR Facility. The <u>Registration</u> deadline **is April 14**, **2023**. The registration fee is US\$200 including course material, lunch, morning and afternoon breaks.

May 28 – June 1, 2023

20th International GC*GC Symposium Venue: Canmore, Alberta, Canada <u>Learn More Here</u>

Overview

The symposium brings together researchers, industry experts, and vendors to share knowledge and advancements in the field of GC×GC. Registration is open until **May 12**. The scientific program will showcase two GC×GC courses, the GC×GC Awards, and a ton of technical content that covers all of the most recent and cutting-edge developments in GC×GC. Two GC×GC short courses: Introductory GC×GC and Advanced topics in GC×GC run in parallel for about 4 hours. The Introductory Course is intended for those with limited experience with GC×GC or who have never used this technique but are interested in learning more. The Advanced Course is designed for people who are already familiar with GC×GC but want to take their analyses to the next level.

Take Your **Metabolomics Workflow** to the **Next Level**

End-to-end metabolomics solutions

Learn more





June 4 – 8, 2023

71st ASMS Conference on Mass Spectrometry and Allied Topics Venue: George R. Brown Convention Center (GRB) | Houston, Texas Learn More Here

Overview

Advance registration deadline for the conference and short courses – **April 30, 2023** All short course registration closes – **May 24, 2023** (may close earlier if capacity limit is met) Closing event ticket sales – **June 5, 2023**

June 15 – 16, 2023

4th Annual Canadian Metabolomics Conference (CanMetCon) Venue: Prince of Wales Hotel, Niagara-on-the-lake, Ontario, Canada Learn More Here

Overview

Just before the 19th Annual Conference of the Metabolomics Society, The Metabolomics Innovation Centre is organizing a conference where leading scientists in metabolomics will share their knowledge and updates. This year's conference will focus on scientific themes in "Exposomics", advancing the understanding of exposures in Medicine, Agriculture/Food/Cannabis, Environment/Industrial Settings, and Clinical Epigenomics.

Early-bird fee for students is \$150 CAD, and \$250 CAD for all others. All fees are in \$CAD and are subject to applicable taxes and fees.

- April 15, 2023: Early-bird registration deadline is extended
- Still Open: Abstract submission for both oral and poster

The program is now available on the website. Check for more updates.

June 18 – 22, 2023

19th Annual Conference of the Metabolomics Society Venue: Niagara Falls, Ontario, Canada <u>Learn More Here</u>

Overview

Save the date! Visit the website for updates over the coming weeks.

- Abstract submission is OPEN!
- March 13, 2023: Oral abstract deadline Now Closed
- May 16, 2023: Poster abstract deadline

Check the website for topics and requirements.



June 26 – 30, 2023

Introduction to Nutritional Metabolomics

Venue: Department of Nutrition Exercise and Sports, University of Copenhagen,

Denmark

Learn More Here

Overview

The course will provide a general overview of LC-MS-based untargeted metabolomics from study design to results and will be exemplified by its specific application in nutrition. It will be delivered using a mixture of lectures, hands-on data preparation and analysis, computer-based practical sessions, and discussions. Visits to wet labs and instructions on human sample preparation procedures are included but there is no practical lab work.

October 23 – 27, 2023

5th Annual MANA Conference

Venue: Columbia, MO, USA

Learn More Here

Overview

The 2023 conference will be held October 23-27, 2023 on the campus of the University of Missouri in Columbia, MO. Professor Lloyd Sumner will chair the meeting and is developing an exciting program that will appeal to many interests in metabolomics. This year, MANA is excited to partner with the International Lipidomics Society (ILS), and the 2023 conference will have dedicated sessions for lipidomics, and an evening workshop with the ILS. Check out the conference website for program updates.

November 17 – 25, 2023

14th European Nutrition Conference (ENC) FENS 2023

Venue: Belgrade, Serbia

Learn More Here

Overview

The 14th European Nutrition Conference will be held in Belgrade, the capital city of Serbia. The theme of the conference is "Food, Nutrition, and Health: Translating science into practice". Around this theme, the conference will deliver a high-quality program, featuring international speakers across plenary sessions and symposia. Other features of the program will be discussions and debates, industry symposia, panel sessions, and networking opportunities including several specifically catering to early career researchers. Early Bird Registration is from **February 15 -July 10, 2023**.



Metabolomics Jobs

If you have a job to post, please email the MetaboNews team at metabolomics.innovation@gmail.com. We may remove a listing after 6 months if we do not receive a confirmation that it is still necessary. However, if you would like us to repost it, please contact us.

Job Title	Employer	Location	Deadline	Source
Postdoctoral Research Associate-Sumner Lab	Nutrition Research Institute	Kannapolis, North Carolina, US	Until filled	The University of North Carolina
Research Engineer in bio- informatics, chemometrics /data science applied to untargeted metabolomics & lipidomics analysis	Bioinformatics and Biostatistics HUB, Institut Pasteur		March 24, 2023	Metabolomics Society, Institut <u>Pasteur</u>
Research associate (computational metabolomics)	Leibniz Institute of Plant Biochemistry	Helle, Germany	June 15, 2023	Leibniz Institute of Plant Biochemistry
Postdoctoral Research Associate - Pharmaceutical Sciences	St. Jude Children's Research Hospital	Memphis, Tennessee, USA	Until filled	Metabolomics Association of North America
Postdoctoral Position in Big Data Analytics for Metabolomics and Exposomics	Du-Lab Research, North Caroline at Charlotte	Charlotte, North Carolina, USA	Until filled	Du-Lab (please contact xiuxia.du@uncc.edu)
Senior Research Associate	Corteva	Johnston, Iowa, USA	Until filled	Metabolomics Association of North America
Doctoral Candidates	HUMAN – Harmonising and Unifying Blood Metabolomics Analysis Networks	Europe	Until filled	HUMAN Doctoral <u>Network</u>
Mass Spectrometry Specialist in metabolomics lab (Research Assistant III)	Li's Metabolomics Lab at the Jackson Laboratory for Genomic Medicine	Farmington, Connecticut, USA	Until filled	Metabolomics Association of North America



Job Title	Employer	Location	Deadline	Source
Research Technician in Mass Spectrometry	The Wishart Lab and the Wishart Node of TMIC, University of Alberta	Edmonton, Alberta, Canada	Until filled	University of <u>Alberta</u>
Assistant Professor in Mass Spec and/or Metabolomics	Michigan State University	East Lansing, Michigan, USA	Oct. 27, 2024	Michigan State <u>University</u>
Senior Scientist	Metabolomic Technologies Inc.	Edmonton, Alberta, Canada	Until filled	MetaboNews Jobs
Scientist	Center for Proteomics and Metabolomics at St. Jude Children's Research Hospital	Memphis, Tennessee, USA	Until filled	St. Jude Children's <u>Research Hospital</u>
Postdoctoral Fellows (Metabolomics, Proteomics, and Informatics - Microbial Infections)	University of Calgary	Calgary, Alberta, Canada	Until filled	<u>Lewis Research</u> <u>Group</u>
Research Specialist, Emory Integrated Metabolomics and Lipidomics Core	Emory University	Atlanta, Georgia, USA	Until filled	Emory University
Postdoctoral Fellow in Food Safety/Non-Targeted Analysis	US FDA's Center for Food Safety and Applied Nutrition (CFSAN)	College Park, Maryland, USA	Until filled	Metabolomics Association of North America
Postdoctoral Position in Metabolomics and Proteomics Data and Development of Cardiovascular Disease in Women	Brigham and Women's Hospital	Boston, Massachusetts, USA	Until filled	Brigham and Women's Hospital
Postdoctoral Research Fellow (LC-MS and Data Science for Metabolomics)	The Li Lab and the Li Node of TMIC, University of Alberta	Edmonton, Alberta, Canada	Until filled	<u>University of</u> <u>Alberta</u>
Various Positions	Various	Various (within North America)	Various	Metabolomics Association of North America

