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The Metabolomics Innovation Centre  
[metabolomics.innovation@gmail.com](mailto: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.

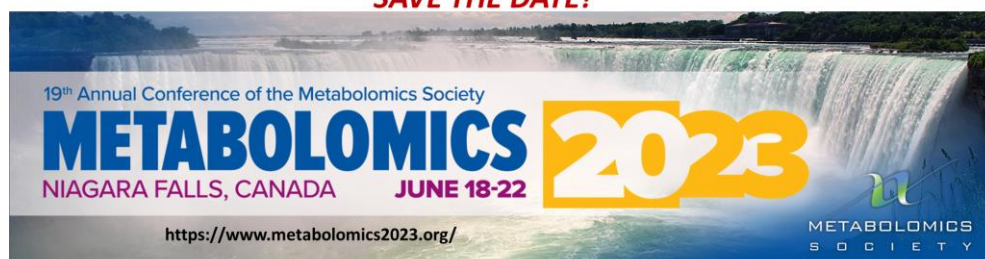
## Metabolomics Society News

### Conference Corner

#### Metabolomics 2023 – Niagara Falls, Canada

June 18-22

**SAVE THE DATE!**



**\* Abstract Submissions NOW Open!**

#### Conference Themes:

- Health and Disease
- Plant, Food, Environment and Microbes
- Computational, Statistics, and Bioinformatics
- Technology & Methodology Advances
- Mental Health, Drug Addiction, Medicinal Cannabis



The 19th Annual Conference of the Metabolomics Society will be held in downtown Niagara Falls, Canada, at the Niagara Falls Convention Centre from June 18-22, 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 offers an ideal location to host this conference with convenient access to airports in Toronto or Hamilton (Ontario), and Buffalo (New York).

The conference will cover several major scientific themes ranging from 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. Planning for the meeting is well underway with outstanding plenary speakers and engaging workshops already confirmed, which you can view on the website. This includes details on hotel accommodation within walking distance to the conference centre and the majestic Horseshoe Falls, as well as visa information for travel to Canada.

Abstract submission for the conference is now open with an oral abstract deadline of **March 6, 2023**. For more information and regular updates please visit <https://www.metabolomics2023.org/>

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



## Members' Corner

### Board of Directors

Dear Society Members,

I wish you all a very Happy New Year. And for those who celebrate Christmas, I hope the festivities were very pleasant and that you had time to relax and meet up with family and friends.

When I think about our scientific family, I am reminded that the end of 2022 marked 18 years since the Metabolomics Society was constituted under the vision of Rima Kaddurah-Daouk. The field of metabolomics has certainly grown and flourished, and as members of the society, we should all be very pleased with what we have accomplished over the last 18 years.

In 2004 when the society was just starting, metabolomics was emerging as an important scientific discipline. Eighteen years on I think we can all agree that metabolomics is now a mature subject and our society, like a person celebrating their 18th birthday, has now come of age. One of the central tenets of the Metabolomics Society has always been to promote the growth, use, and understanding of metabolomics within the life sciences across the globe and we shall continue to strive to achieve this.

I wrote in my last message to you that preparations were underway for our annual meeting in Niagara Falls, and there has been great progress on the

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

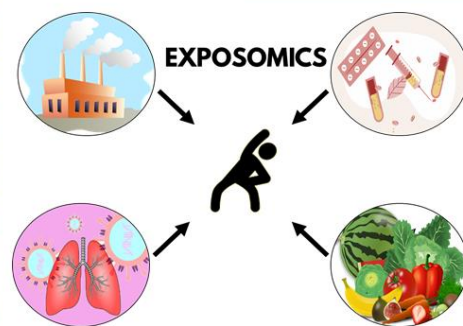
[info@metabolomicssociety.org](mailto:info@metabolomicssociety.org)

Membership Enquiries

[membership@metabolomicssociety.org](mailto:membership@metabolomicssociety.org)



### 4<sup>th</sup> Annual Canadian Metabolomics Conference (CanMetCon) 2023



Early Bird Registration is OPEN!!!



- **Date :** Thu, Jun 15, 2023 - Fri, Jun 16, 2023
  - **Time :** 09:00 AM - 06:00 PM ET
  - **Venue:** Prince of Wales Hotel  
Niagara-on-the-Lake, ON, Canada
- <https://app.groupize.com/e/tmic-conference-2023>

Early bird registration for the 4th Annual Canadian Metabolomics Conference (CanMetCon) 2023 is now open. Don't miss the opportunity to register at a discounted rate and secure your spot. Explore the beauty of Niagara-on-the-Lake while participating in the conference: <https://app.groupize.com/e/tmic-conference-2023>

preparations. We are very grateful to Phil and Dajana as Co-Chairs for Metabolomics 2023 as well as Natasa who chairs our Society's Conference Committee. The website – <https://www.metabolomics2023.org> – now contains plenty of useful information including speakers and hotel information. For those interested in presenting their work to our community the abstract submission is now open. There are lots of different subject areas including:

- Metabolomics in health and disease
- Plants, food, environment, and microbes
- Technology advancements
- Computational metabolomics, statistics & bioinformatics
- Mental health, drug addiction, and medical cannabis

In addition, information on abstract grading and the rubric scoring we shall use are also provided, and this may help you hone your research summaries.

I would encourage you to look at the Bios of the [Plenary Speakers](#) who include Lorraine Brennan, Caroline Johnson, Marja Lamoree, Susan Murch, and Gary Patti; as well as our [Keynote Speakers](#) Sonia Anand, Takeshi Bamba, Anne Bendt, Ian Castro-Gamboa, Subhra Chakraborty, Rachel Kelly, María Eugenia Monge, Scott Smid, Justin van der Hooft and Peter Würtz. There is plenty of exciting science to listen to, and I am thrilled with this excellent lineup of phenomenal speakers. As you know, we present several awards at our meeting and it is nice that Lorraine, who was one of the 2022 Honorary Fellows, will present, along with María and Rachel who were awarded Medals in 2022, and Justin who won the President's Award in 2021.

Regarding awards, visit the Society website to view the nomination details for all Awards: [Honorary Fellows – Metabolomics Society Medal](#) – The President's Award. The deadline to submit a nomination is **February 24, 2023**. Please be thinking as to whom to nominate for these. As stated on our website, the criteria for these three awards are as follows:

- An [Honorary Fellowship](#) is a significant lifetime award granted by the Society to exceptional members of our community and nominees have either made outstanding contributions to the

Metabolomics Society or recognized as making a pioneering and sustained contribution to the science of metabolomics.

- The [Metabolomics Society Medal](#) is for mid-career members of the society and is open to those members who have been awarded a Ph.D. 10-15 years prior to the closing date for nominations in each round.
- The [President's Award](#) recognizes outstanding achievements in metabolomics. It is available for Society members who have been awarded a Ph.D. no more than 5-10 years prior to the closing date for nominations in each round.

In order to offer visibility to award winners of the Society Medal and The President's Award, awardees will be offered the opportunity to present their work as keynote speakers during the conference.

At our last Board of Directors (BODs) meeting we discussed access to our annual meetings from scientists from low-to-middle-income countries. We are therefore delighted to let you know that we have initiated a new fund to support a number of these metabolomics researchers from across the globe to attend Metabolomics 2023. This fund will be for 5 metabolomers to receive \$1000 USD towards travel, hotel, and subsistence. In addition, we shall also include complimentary registration for these 5 individuals. If you're interested in learning more about this, and perhaps applying for funding, then please keep an eye out for announcements on our web page. This will contain the assessment criteria and will be coordinated by our EMN.

All the very best.

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

### [Early-career Members Network \(EMN\)](#)

#### **Webinar Series**

The EMN would like to thank once again Professor Teresa Fan, Department of Toxicology, Markey Cancer Centre, University of Kentucky for her excellent presentations on innate immune activation by checkpoint inhibition in cultured human lung cancer



tissues. Stay tuned for announcements sent over email and posted on our social media platforms for the upcoming webinar!

### EMN Travel Award

The 2023 EMN Travel Award aims at providing support to Early-Career scientists to attend and actively participate in the 19th International Conference of the Metabolomics Society to promote their professional development. The Metabolomics Society strives to promote diversity, inclusion, equality, therefore we highly encourage applications from low- and middle-income countries. The application deadline is **March 6th, 2023, at 12 pm UTC**. All entries must be received before the stated deadline in order to be considered. To apply, please fill out the travel award application form. Decisions will be communicated to all applicants over email by April 16th, 2023, and winners will be announced on the Metabolomics Society website, social media platforms and in the MetaboNews newsletter. [Click here](#) to view the official announcement.

To apply, fill the [EMN award application form](#) and the required documentation in one single pdf during the abstract submission process.

For questions, please contact [info.emn@metabolomicsociety.org](mailto:info.emn@metabolomicsociety.org)

## International Affiliates' Corner

### [Metabolomics Association of North America \(MANA\)](#)

Visit <https://metabolomicsna.org>

### NMR Interest Group provides a response to NIH RFI

In a response to a Request for Information (RFI): Soliciting Input on the Use and Reuse of Cancer Metabolomics Data from NIH/NCI, the [MANA NMR Interest Group](#) provided a response that detailed a list of their experiences and recommendations. The document was provided to Dr. Kristine Willis, Program Director, Division of Cancer Biology at NCI/NIH. She was grateful for the effort and found the consensus recommendations very helpful. For details, click [here](#) for the accompanying PDF.

### Upcoming SODA Meet

The Software and Data (SODA) Interest Group will be hosting the next SODA Meet on Tuesday, February 14th at 3PM Eastern. Zoom links will be provided through their mailing list, which can be found on the [SODA webpage](#). SODA is also looking for speakers for April and June SODA Meets. If you would like to present, please reach out to [soda@metabolomicsna.org](mailto:soda@metabolomicsna.org).

### 2023 WomiX Mentorship Program is open

The WomiX Mentorship Program is now accepting applications for mentors and mentees for 2023, with a deadline to apply of January 27, 2023.

#### *How does it work for both Mentors and Mentees?*

- Each mentor will be assigned a mentee. If you are assigned 2 mentees you can also form a **pod** and meet as a group.
- Matchmaking will occur after our first mentorship event in February.
- It's highly recommended that mentors & mentees set up monthly 1-hr virtual check-ins. Check-ins can be with your pod or you can meet on a one-on-one basis.
- It's highly recommended that mentors & mentees attend mentorship events (approx. 1 hour).
- The program is approximately 11 months and ends in Dec.
- **How to apply? The deadline is Jan 27, 2023.**  
[Apply to be a mentor here.](#)  
[Apply to be a mentee here.](#)
- If you have any questions, please contact [womix@metabolomicsna.org](mailto:womix@metabolomicsna.org)

### New and departing board of directors

A new year brings change and MANA recently elected two new members to the Board of Directors: Professors Facundo Fernández of the Georgia Institute of Technology and Ian Lewis of the University of Calgary. Welcome to both! MANA also offers deep appreciation and thanks to board members whose terms have recently concluded: Professors Oliver Fiehn of UC Davis and Bob Powers of the University of Nebraska. Thank you both very much for your significant dedication to and volunteer efforts on behalf of the MANA membership!

## Other News

### [2023 Honorary Fellows – Call for Nominations!](#)

The Society welcomes nominations for the 2023 Honorary Fellowships! An Honorary Fellowship is a significant lifetime award granted by the Society to exceptional members of our community. Commissioned in 2012, and with up to two awards each year, the Board of Directors is pleased to recognize outstanding scientists.

[Visit the webpage](#) to review the nomination procedure. The deadline for applications is **February 24, 2023**.

### [2023 Metabolomics Society Career Medals – Call for Nominations!](#)

The Metabolomics Society seeks to recognize the outstanding contributions of individuals to the field of

metabolomics through the presentation of up to two **Metabolomics Society Medals**. The Metabolomics Society Medals are designed to recognize outstanding contributions to the field of Metabolomics.

Medals winners will each be presented with an engraved medal at the annual conference of the Metabolomics Society, and receive free registration for that meeting.

**NEW!** Medal winners will have the opportunity to give a keynote presentation during the Society conference the same year they receive the award. In addition to complimentary registration, reasonable travel & hotel expenses will be reimbursed by the Society.

The Call for Nominations is now open! [Visit the website](#) to find the eligibility requirements and the nomination form. The deadline to submit nominations is **February 24, 2023**.



Metabolomics and  
Human Health  
*Gordon Research Conference*

Examining the Intersection Between  
Systemic and Cellular Metabolism  
and Lifestyle Factors to Understand  
Health and Disease

[March 12-17, 2023](#)

[Venue: Barga, Lucca, Italy](#)

Chairs: Steven S. Gross  
Lorraine Brennan

Vice Chairs: Susan Jenkins Sumner  
Warwick Dunn

The Metabolomics and Human Health Gordon Research Conference (March 2023) will highlight state-of-the-art metabolomics technologies and how such technologies can be used to study human health. Places are limited and filling up, so we encourage early submission to avoid disappointment.

To apply, click [here](#).

# SpOtlight



## biocrates MxP® Quant 500 XL kit

### Quantitative metabolomics for more than 1,000 metabolites – The new MxP® Quant 500 XL kit and WebIDQ software

Markus Langsdorf, Stephen Dearth, Barbara Ustaszewski, Therese Koal

biocrates life sciences ag, Innsbruck, Austria

#### Standardized metabolomics – An introduction

Robust and reproducible results are the cornerstone of any scientific finding. Such results require standardized and quantitative methods. Over the last decade, biocrates kit technology has emerged as the gold standard in quantitative metabolomics, presenting new possibilities in the study of human health and disease. International ring trials have proven the quality and reproducibility of biocrates kit data<sup>1</sup>, allowing researchers to conduct local sample measurements and contribute to the global scientific community with confidence.

Users get started quickly and easily with the ready-to-use kits, which come with calibration standards, quality controls, test samples for system checks, consumables, protocols, and quick start guides. The kits are provided in a patented 96-well plate format with all internal standards already incorporated. Results from multiple mass spectrometry systems are comparable across labs allowing data integration even retrospectively. With a standardized and validated workflow, implementation is straightforward in any laboratory.

Here, we look at the new [MxP Quant 500 XL kit](#),

which offers the most comprehensive metabolomics analysis to date. It's designed to work with [WebIDQ](#), biocrates' workflow management software, and [MetaboINDICATOR](#), the data interpretation extension, for an end-to-end solution.

#### MxP Quant 500 XL kit

##### Unraveling the complexity of disease with the new MxP Quant 500 XL kit

The [MxP Quant 500 XL kit](#) offers the largest combination of lipids and small molecules for quantitative metabolic profiling in a single kit. The XL kit expands on the well-established MxP Quant 500 kit, adding close to 400 lipids to quantify in total up to 1,019 metabolites from 39 biochemical classes. It only requires 20 µL sample volume and is applicable to various matrices. Hundreds of the 1,019 metabolites relate to healthy aging, neurodegeneration, and cardiometabolic diseases, including metabolism of non-alcoholic fatty liver disease (NAFLD)<sup>2</sup> and cardiovascular disease (CVD)<sup>3</sup>, suggesting significant implications for population health. In addition, the kit comes with more than 400 quantifiable metabolism indicators, covering hundreds of metabolic pathways.

Metabolism indicators allow researchers to better understand their dataset and have a quick view on potential pathophysiological processes.

### Kit workflow – Quantitative metabolomics made easy

What does the workflow look like in practice? Project design begins in the new [WebIDQ](#) companion software (described below) where samples are registered and arranged together with blanks, calibration and quality control samples on a custom 96-well plate layout. The sample worklist can be directly exported to the software of the mass spectrometer as an acquisition sequence file, and as a printable template for the kit preparation in the laboratory.

The [MxP Quant 500 XL kit](#) consists of two separate patented filter plates. Each needs 10 µL of sample, pipetted directly onto the plate so it can incorporate with the internal standards. After derivatization, samples are extracted in a methanol-based solvent. The sample preparation is completed by final dilution steps using empty 96-deep well plates. Preparation of the two kit plates can be performed simultaneously.

Small, polar metabolites are measured by liquid chromatography-tandem mass spectrometry (LC-MS/MS). Lipids and hexoses are measured using flow injection analysis-tandem mass spectrometry (FIA-MS/MS). The total run time of a full kit (80 study samples) is approximately 46 hours enabling measurement of over 1,000 metabolites per sample.

Raw data files are directly processed in WebIDQ following an automated, guided quantification and validation procedure. Analyte chromatogram peaks are integrated, and concentrations are calculated against calibration curves or internal standards.

Quality control samples are used to automatically assess performance with the software checking both accuracy and reproducibility across the kit. The results can be customized into a report with tools available for data normalization before being exported for further statistical analysis and biological interpretation. Figure 1 shows a summary of the overall kit workflow.

### WebIDQ software

#### The next evolution of metabolomics workflow management

Generating reliable and reproducible metabolomics data calls for a carefully-managed, efficient workflow. This is where [WebIDQ](#) comes in. WebIDQ guides and accelerates kit users through the entire workflow, from sample registration and plate layout customization, through metabolite quantification and data reporting. In addition, the integrated MetaboINDICATOR tool automatically calculates predefined sums and ratios of metabolite concentrations for advanced biological interpretation (described below).

Building on the proven functionality of the longstanding MetIDQ software, WebIDQ has been designed specifically for a cloud-based infrastructure, allowing data to be accessed and processed from any device through a browser. For institutions with more restrictive internet access policies, WebIDQ is available as an on-premises version with a locally installed database and limited features.



Figure 1: Total workflow of the MxP Quant 500 XL kit.



Further new and improved features for streamlined sample analysis and confidence in generated metabolomics data include the following:

### Automated peak picking

Automated peak picking based on machine learning increases reproducibility, simplifies peak integration and speeds up metabolite quantification (Figure 2).

### Improved performance assessment

New data validation features calculate coefficients of variation (CVs) across quality control replicates, facilitating better performance assessment and higher confidence in the analytical quality of the data (Figure 3).

### Easy user management

A WebIDQ subscription allows up to 10 users to collaborate efficiently across projects and groups within the organization, all through the [My biocrates](#) portal.

### More flexibility

The WebIDQ cloud software is accessible from any computer at any time with no installation requirements, so users can work from multiple locations.

### Worry-free cloud-based service

Software updates go live immediately so users always have access to the latest version, while biocrates takes care of database backups and maintenance.



Figure 3: Plate validation – Calculation of accuracies and CVs for quality control and performance check

## MetaboINDICATOR™ – Transform metabolomics data into actionable insights with a single click

With the [MxP Quant 500 XL kit](#) putting a wealth of quality metabolomics data at their fingertips, the next challenge for researchers is to make sense of their results and extract meaningful insights. Being able to calculate the sums and ratios of metabolite concentrations offers another layer of detail about enzyme activities, which can act as indicators of pathophysiological conditions.

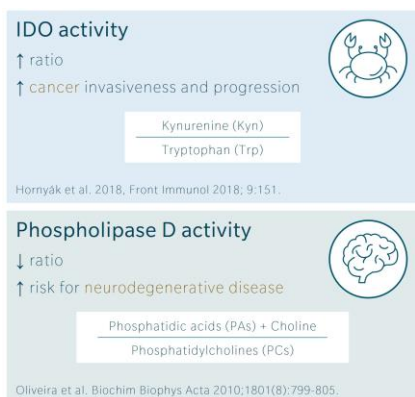
For this reason, biocrates created [MetaboINDICATOR](#), a software tool that facilitates the analysis and interpretation of targeted metabolomic and lipidomic datasets. MetaboINDICATOR is incorporated directly into WebIDQ and automatically calculates more than 400 predefined sums and ratios from the MxP Quant 500 XL panel that are highly relevant to biological and clinical applications. The tool allows researchers to explore advanced insights into metabolic processes and pathways and gain deeper biological interpretations of the results. Examples are given in Figure 4.

MetaboINDICATOR also allows for normalization of inter-individual variations, resulting in higher statistical power and confidence of metabolomics data. All indicators include access to scientific references. Users can also create custom metabolism indicators and add them to the analysis.



Figure 2: Automated peak picking and multiple view options allow fast peak integration and review





**Figure 4:** Two examples of metabolic indicators related to cancer progression (above) and neurodegenerative disease (below).

## Conclusion

The [MxP Quant 500 XL kit](#) in combination with the [WebIDQ](#) workflow management software and [MetaboINDICATOR](#) tool offers a scalable solution for comprehensive and quantitative metabolomics. The standardized, easy-to-use format and streamlined setup are ideal for both scientists making a fresh start in the field of metabolomics as well as the experienced metabolomics scientists looking for more efficient ways to generate insights. With reproducible results, researchers can collaborate, share, and build on new discoveries, facilitating the use of metabolomics for new insights in diagnosis, treatment response prediction, drug development and other clinical applications.



## Free webinar

### Metabolomics in biomarker discovery and functional genomics using the MxP Quant 500 XL kit

For a live demonstration of the MxP Quant 500 XL kit and WebIDQ, join our free [webinar](#) on January 26, 2023 featuring Dr. Guiseppe Astarita (Senior Director, Biomarker Discovery @Arkuda Therapeutics) and Dr. Therese Koal (CTO @biocrates). See for yourself how the kit generates data and insights that may support your own research projects.

## References

1. Siskos et al. Interlaboratory Reproducibility of a Targeted Metabolomics Platform for Analysis of Human Serum and Plasma. *Anal. Chem.* 2017; 89(1):656–65.
2. Burz et al. Fecal Microbiota Transplant from Human to Mice Gives Insights into the Role of the Gut Microbiota in Non-Alcoholic Fatty Liver Disease (NAFLD). *Microorganisms* 2021; 9(1):199.
3. Haghikia et al. Propionate attenuates atherosclerosis by immune-dependent regulation of intestinal cholesterol metabolism. *Eur Heart J* 2022; 43(6):518–33.

## Recent Publications

### Recently published papers in metabolomics

- Review: [Artificial intelligence-based multi-omics analysis fuels cancer precision medicine](#) (Open access)
- Review: [Liver-derived metabolites as signaling molecules in fatty liver disease](#) (Open access)
- Review: [Mass spectrometric exploration of phytohormone profiles and signaling networks](#)
- Review: [Untargeted metabolomic approaches in food authenticity: A review that showcases biomarkers](#)
- [Algal nutraceuticals: A perspective on metabolic diversity, current food applications, and prospects in the field of metabolomics](#)
- [Brain regions show different metabolic and protein arginine methylation phenotypes in frontotemporal dementias and Alzheimer's disease](#) (Open access)
- [ChemFOnT: the chemical functional ontology resource](#) (Open access)
- [Environment relevant concentrations of lithium influence soybean development via metabolic reprogramming](#)
- [Faecal metabolite deficit, gut inflammation and diet in Parkinson's disease: Integrative analysis indicates inflammatory response syndrome](#) (Open access)
- [Lenz Lenses in a Cryoprobe: Boosting NMR Sensitivity Toward Environmental Monitoring of Mass-Limited Samples](#) (Open access)
- [Mobile genetic elements from the maternal microbiome shape infant gut microbial assembly and metabolism](#)
- [Multi-omics profiles of the intestinal microbiome in irritable bowel syndrome and its bowel habit subtypes](#) (Open access)
- [Multi-Omic Profiling of a Newly Isolated Oxy-PAH Degrading Specialist from PAH-Contaminated Soil Reveals Bacterial Mechanisms to Mitigate the Risk Posed by Polar Transformation Products](#) (Open access)
- [Noninvasive testing for mycophenolate exposure in children with renal transplant using urinary metabolomics](#)
- [The fecal arsenic excretion, tissue arsenic accumulation, and metabolomics analysis in sub-chronic arsenic-exposed mice after in situ arsenic-induced fecal microbiota transplantation](#)
- [Unknown Metabolite Identification Using Machine Learning Collision Cross-Section Prediction and Tandem Mass Spectrometry](#)



# Metabolomics Events

## FEATURED EVENT



**March 12-17, 2023**

### **Metabolomics and Human Health Gordon Research Conference**

Examining the Intersection Between Systemic and Cellular Metabolism and Lifestyle Factors to Understand Health and Disease

Venue: Barga, Lucca, Italy

[Learn More Here](#)

#### **Overview**

Chairs: Steven S. Gross and Lorraine Brennan

Vice Chairs: Susan Jenkins Sumner and Warwick Dunn

The Metabolomics and Human Health Gordon Research Conference (March 2023) will highlight state-of-the-art metabolomics technologies and how such technologies can be used to study human health. Places are limited and filling up, so we encourage early submission to avoid disappointment. To apply click [here](#).

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**January 26, 2023**

### **Online Seminar at the MSACL Connect online event**

Translating global metabolomics into clinical applications

Venue: Online

[Learn More Here](#)

#### **Overview**

Dr. Liang Li is invited to deliver a 50-minute seminar on discussing the current challenges and potential solutions for “Translating global metabolomics into clinical applications” at the MSACL Connect online event. There is no cost to register for this presentation.



## January 26, 2023

### Bits & Bites # 01: Fundamentals of Lipidomics

Venue: Online

[Learn More Here](#)

#### Overview

This 9-part short course series will feature in-depth topics in untargeted metabolomics such as a deeper look into MS-DIAL, mass spectrometry for metabolomics, lipidomics, GNPS, MetaboAnalyst, and so many others. Each short course can be taken individually or you can select multiple *Bites*. Participants will gain a deeper insight into current software, methods, and pitfalls. Each session starts promptly at 9 a.m. (Pacific Time) and will take approx. 4 hours. The courses will be conducted in a highly interactive manner, with the use of freely available software and databases. The tuition is \$175 USD per *Bite*, except for #5. The tuition for #5 is \$350 USD as it will take approx. 8 hours.

This 1<sup>st</sup> course (for 2023) is taught by Dr. Tong Shen from UC Davis, and no prior knowledge or software is required. In this short course, topics related to lipids and systems-level scale analysis of lipids (lipidomics) will be covered:

- introduction to lipids, classification, and functions;
- mass spectrometry-based lipidomics, separation techniques, and perspectives on other novel technologies;
- case studies of lipidomics applications;
- entire experimental pipeline—study design, sample extraction, analysis, data processing, identification, statistical methods, and visualization/interpretation resources;
- quality control and standardization.

Participants will gain a high-level overview of lipidomics in order to determine suitable strategies for their own research

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

End-to-end metabolomics solutions

[Learn more](#)



## February 9, 2023

### Bits & Bites # 02: Introduction to the GNPS Ecosystem - Tools, Visualizations, and Data

Venue: Online

[Learn More Here](#)

#### Overview

This is the 2<sup>nd</sup> course (for 2023) and is taught by Dr. Mingxun Wang from UC Riverside. No programming experience is necessary. This short course focuses on how to look at the data using classical molecular networking on GNPS by reanalyzing public MassIVE data with classical molecular networking, visualizing raw mass spec data with GNPS Dashboard, and searching/contextualizing MS/MS data with MASST.

The goals of the short course are to:

- Select spectrum files and metadata from MassIVE public dataset;
  - Run classical molecular network workflow;
  - Qualitatively comparison of cohorts with molecular networks;
  - Visualize LC/MS Data Interactively - GNPS Dashboard;
  - Search Public Data with MASSTIdentify putative compounds;
  - Visualize your molecular families.
- 

## February 14, 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. SODAMeet is a platform where data generators and computational scientists can share their use of software/data. During SODAMeet (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.

## March 28-31, 2023

### [EMBL-EBI course | Introduction to Metabolomics Analysis](#)

[Venue: Hinxton, Cambridgeshire, United Kingdom](#)

[Learn More Here](#)

#### Overview

The European Bioinformatics Institute (EMBL-EBI) is organizing an on-site course at the EMBL-EBI Wellcome Genome Campus in Hinxton. This course will provide an introduction to metabolomics through lectures and hands-on sessions, using publicly available data, software, and tools. It is an open application with a selection for 26 seats. Please submit all required documents for the application process by **January 4, 2023**.

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## June 15-16, 2023

### [4th Annual Canadian Metabolomics Conference](#)

[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. Mark your calendars and stay tuned for more details!

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## June 18-22, 2023

### [19<sup>th</sup> Annual Conference of the Metabolomics Society](#)

[Venue: Niagara Falls, Ontario, Canada](#)

[Learn More Here](#)

#### Overview

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

- Jan. 2023: Abstract submission opens
- Mar. 6, 2023: Oral abstract deadline
- May 16, 2023: Poster abstract deadline

Check the website for topics and requirements.



## November 17-25, 2023

### 14th European Nutrition Conference (ENC) FENS 2023

Venue: Belgrade, Serbia

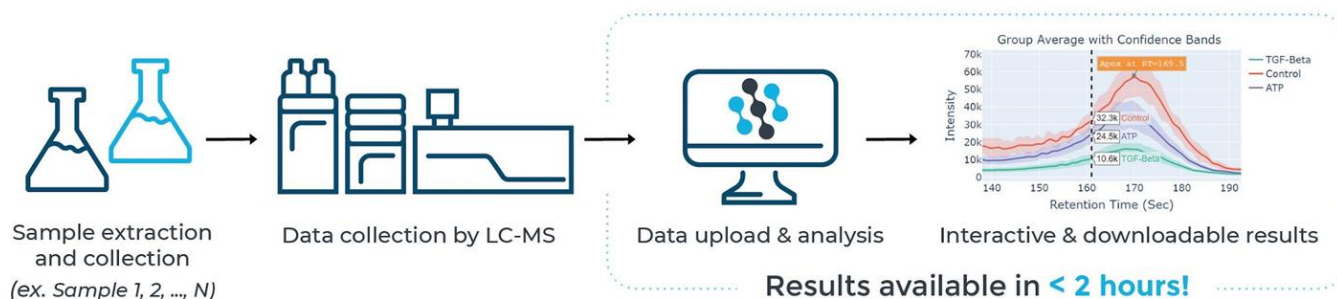
[Learn More Here](#)

#### 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**.



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#### Who is BioRankings?

A team of expert statisticians that bring decades of experience analyzing data and developing software in diverse subject areas.

Learn more at [biorankings.com](https://biorankings.com)

#### Questions?

Do you have questions about your metabolomics data? Let's talk!



+1-314-633-1821



[contact@biorankings.com](mailto:contact@biorankings.com)



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# Metabolomics Jobs

If you have a job to post, please email the MetaboNews team at [metabolomics.innovation@gmail.com](mailto: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
Doctoral Candidates	HUMAN – Harmonising and Unifying Blood Metabolomics Analysis Networks	Europe	Until filled	<a href="#">HUMAN Doctoral Network</a>
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	<a href="#">Metabolomics Association of North America</a>
Research Technician in Mass Spectrometry	The Wishart Lab and the Wishart Node of TMIC, University of Alberta	Edmonton, Alberta, Canada	Until filled	<a href="#">University of Alberta</a>
Assistant Professor in Mass Spec and/or Metabolomics	Michigan State University	East Lansing, Michigan, USA	Oct. 27, 2024	<a href="#">Michigan State University</a>
Research Scientist, Metabolomics	The Sarafan ChEM-H Metabolomics Knowledge Center, Stanford University	Stanford, CA, USA	Until filled	<a href="#">Stanford University</a>
Senior Scientist	Metabolomic Technologies Inc.	Edmonton, Alberta, Canada	Until filled	<a href="#">MetaboNews Jobs</a>
Scientist	Center for Proteomics and Metabolomics at St. Jude Children's Research Hospital	Memphis, Tennessee, USA	Until filled	<a href="#">St. Jude Children's Research Hospital</a>
Postdoctoral Fellows (Metabolomics, Proteomics, and Informatics - Microbial Infections)	University of Calgary	Calgary, Alberta, Canada	Until filled	<a href="#">Lewis Research Group</a>
Research Specialist, Emory Integrated Metabolomics and Lipidomics Core	Emory University	Atlanta, Georgia, USA	Until filled	<a href="#">Emory University</a>
Research Associate II - Metabolomics	The Broad Institute of MIT and Harvard	Cambridge, MA, USA	Until filled	<a href="#">The Broad Institute</a>

Job Title	Employer	Location	Deadline	Source
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	<a href="#">Metabolomics Association of North America</a>
Postdoctoral Position in Metabolomics and Proteomics Data and Development of Cardiovascular Disease in Women	Brigham and Women's Hospital	Boston, Massachusetts, USA	Until filled	<a href="#">Brigham and Women's Hospital</a>
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	<a href="#">University of Alberta</a>
Various Positions	Various	Various (within North America)	Various	<a href="#">Metabolomics Association of North America</a>