

In This Issue

Metabolomics Society News

MetabolInterview

Dr. Natasa Giallourou

Recent Publications

Conferences & Events

Jobs

Offered

Wanted

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

Metabolomics Society News

Member's Corner

Early-career Members Network (EMN)

New Committee Announcement:

The [EMN committee](#) is delighted to welcome the following new members for 2021-2022:

- Álvaro Fernández Ochoa
- Susana Alejandra Palma Duran
- Johanna Jokioja
- Sandi Azab
- Sofina Begum
- Laimdota Zizmare
- Fitri Amalia
- Tee Khim Boon

We would also like to welcome Evelina Charidemou as the new chair of the EMN. The new team is motivated to maintain the initiatives of the EMN but also bring new ideas to the committee. We would like to thank all our former members for their contribution to the EMN.

Task Groups Corner

Precision Medicine and Pharmacometabolomics Task Group

Report on the workshop 'Metabolome Meets the Exposome' (April 28, 2021)

by Matej Orešič¹ (matej.oresic@oru.se) and Craig Wheelock² (Craig.Wheelock@ki.se)

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The Workshop (<http://www.nordicmetsoc.org/MetExposome2021.html>) was organized by The Metabolomics Society Precision Medicine Task Group in partnership with the Nordic Metabolomics Society, Metabolomics Association of North America (MANA) and a number of other organizations and interest groups.

Human health and well-being are intricately linked to environmental quality. Environmental exposures can have lifelong consequences. External exposures, such as exposures to environmental chemicals, can affect the host's metabolism and immune system, which, in turn, can mediate disease risk. Linking exposures to adverse outcomes and biological response, via intermediate phenotypes such as the metabolome, is one of the central themes of the emerging exposome research.

It is thus not surprising that there has been increased interest in the exposome from a metabolomics perspective. This motivated The Metabolomics Society Precision Medicine Task Group to organize a workshop on this topic with the following specific aims:

1. Highlight key research themes and challenges at the interface of metabolomics and the exposome
2. Provide an overview of the major global initiatives in exposome research
3. Explore opportunities for global cooperation in exposome research at the level of metabolomics
4. Discuss the challenges associated with the intersection of exposome science, epidemiology, and precision medicine

The workshop speakers were among the leaders or pioneers of the 'exposomics' field:

- Investigators involved in large (inter)national initiatives (David M. Balshaw from Exposure, Response, and Technology Branch, NIEHS, NC, USA; and Shoji Nakayama from National Institute for Environmental Studies, Tsukuba, Japan)
- Manish Arora (Icahn School of Medicine at Mount Sinai, NY, USA), who discussed novel opportunities in exposome research by utilizing analysis of teeth, as a way to resolve the role of exposures across a temporal dimension
- Investigators covering specific areas directly relevant to different aspects of metabolomics applications in exposome research (Emma Schymanski from University of Luxembourg, Luxembourg; and Benedikt Warth from University of Vienna, Austria)

The presentations were followed by panel discussions, where the speakers were joined by other panelists: Rima Kaddurah-Daouk (chair of the Precision Medicine Task Group), Tuulia Hyötyläinen, Fabien Jourdan, Susan Sumner, Douglas Walker, and the workshop organizers

Matej Orešič and Craig Wheelock.

Following the talks and lively discussion in the panel, a few take-home messages emerged:

- Large national and international initiatives in exposome research have emerged in the US (e.g., NIEHS) and Europe (e.g., The European Human Exposome Network funded by the European Commission and large national initiative in The Netherlands). There are opportunities for increasing interaction between these various initiatives.
- Several large prospective cohorts exist in Asia, e.g., Japan Environment and Children's Study (JECS) led by Shoji Nakayama, where exposome research is one of the key themes and where many opportunities for use of metabolomics exist or are already being exploited. There is also a Birth Cohort Consortium of Asia (BiCCA), however, one of the challenges in performing large-scale studies across multiple Asian countries is lack of common funding mechanisms.
- Timing of exposure matters. The various exposures accumulated over time together impact health later in life. Tools are needed that can measure and deconvolute various exposures over time. Manish Arora presented one such innovative line of research, focusing on teeth, which may provide signatures of various exposures over time including in utero.
- The diversity of the chemical exposome is enormous. No tools can currently cover it in its entirety, let alone together and in co-metabolism with host (and gut microbial) metabolome. In addition to better analytical tools such as those relying on high-resolution mass spectrometry, also chemoinformatic tools including chemical databases are needed in order to facilitate identification of various compounds. These tools are emerging, as presented by Emma Schymanski.

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- The diversity of the chemical exposome is enormous. No tools can currently cover it in its entirety, let alone together and in co-metabolism with host (and gut microbial) metabolome. In addition to better analytical tools such as those relying on high-resolution mass spectrometry, also chemoinformatic tools including chemical databases are needed in order to facilitate identification of various compounds. These tools are emerging, as presented by Emma Schymanski.
- Measuring the exposome is emerging as an important tool for precision medicine. As presented by Benedikt Warth, different personal exposures may, e.g., interfere with drug metabolism, leading to different pharmacodynamics. Metabolomics may serve as a surrogate marker of various exposures. Exposures may also interfere with host metabolism by other means such as by directly impacting hepatic metabolism or the gut microbiome.

The workshop was met with a high level of interest, reinforcing our belief that exposome research offers many new opportunities. Alongside the Precision Medicine Task Group, the workshop was co-organized with the Nordic Metabolomics Society and was partnered by Metabolomics Association of North America (MANA) and five other networks/associations (<https://www.nordicmetsoc.org/MetExposome2021.html#partners>). There were 794 registrations (over 40 countries, from all continents), and 560 dial-ins during the workshop.

We wish to thank the speakers for their excellent presentations, the panelists and attendees for excellent discussions, the workshop partner organizations and networks and Prof. Guowang Xu for promotion of the event in the Chinese metabolomics community. Finally, we thank Elin Sandberg and Åsa Granlund from Örebro University for hosting the workshop and making it run smoothly.

International Affiliates Corner

Metabolomics Association of North America (MANA)

Visit <https://metabolomicsna.org>

The 3rd Annual MANA Conference is here! I would like to thank the organizers at The Ohio State University – Drs. Jessica Cooperstone, Rachel Kopec, Julie Manning, and Matthew Teegarden – and their Scientific Organizing Committee for developing an exciting conference program and webpage. The conference will be held virtually October 18-21, 2021, and the program is now complete, with the following highlights:

- 6 diverse Plenary Speakers
- 36 high-quality Oral Presentations that fall within 6 parallel sessions: Biomedical 1; Computational; Food/Nutrition; Agriculture, Ecology & the Environment; Biomedical 2; and Metabolite ID

Hybrid event –
8th Munich Metabolomics Symposium
November 12th, 2021
09:00 am – 06:00 pm CEST
03:00 am – 12:00 pm EST

Register here

Organizers and sponsors

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METABOLOMICS SOCIETY
EARLY-CAREER MEMBERS NETWORK

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

General Enquiries

info@metabolomicssociety.org

Membership Enquiries

membership@metabolomicssociety.org

- 6 exciting Corporate Member events from Waters, Agilent, IROA, Biocrates, Avanti, and Bruker
- 5 engaging Instructional Workshops

We are looking forward to seeing you there!

Swiss Metabolomics Society (SMS)

Visit www.swiss-metabolomics.ch

This year we are joining forces with the Swiss Group for Mass Spectrometry (SGMS) to organize a joint annual meeting on November 18-19. This joint SGMS/SMS meeting will take place in Beatenberg, pending the evolution of the current pandemic situation, OR alternatively, in a virtual setting.

Four remarkable plenary speakers will cover different fields of mass spectrometry application:

- Thorsten Benter, University of Wuppertal
- Ralf Weber, University of Birmingham
- Silke Grabherr, University of Lausanne
- Michael Witting, Helmholtz Zentrum München

For detailed information about the speakers and their talks (#plenarylectures), please visit:

<https://www.sgms.ch/sgms/ms-meetings/2021-sgms-meeting.php>

The meeting will be preceded by the SGMS/SMS school on Best Practices in Small Molecule Analysis, on November 16.

Detailed information about the school program is available at:

<https://www.sgms.ch/sgms/education/sgms-school-2021.php>

Information for registration and abstract submission for short presentations and poster sessions is available here:

<https://www.sgms.ch/sgms/ms-meetings/2021-sgms-meeting.php#registration>

Save the dates, we are looking forward to seeing you in the fall!



TOGETHER STRONG !

Dr. Natasa Giallourou



**MSCA Postdoctoral Fellow
CY-Biobank
Nicosia, Cyprus**

Biography

Dr. Giallourou is currently an MSCA Postdoctoral Fellow at the newly launched CY-Biobank (<https://biobank.cy/>). Her ongoing projects involve the integration of metabolomics with other 'omics' data in population-based studies for the identification of biomarkers of complex diseases and improved patient stratification.

She earned her PhD in Nutritional Metabolomics from the University of Reading in 2017 and subsequently joined the Department of Metabolism Digestion and Reproduction at Imperial College London where her research focused on the use of metabolic phenotyping to tackle global health challenges with a special interest in infectious diseases and malnutrition. She has also obtained an MSc in Nutrition and Health from Wageningen University and a BSc in Biology from the University of Leeds.

Dr. Giallourou sits on the Board of Directors of the International Metabolomics Society and she has previously served as the Chair of the Society's Early-career Members Network committee which she now is an advisor to.

Interview Q&A

How did you get involved in metabolomics?

I was first introduced in the field of metabolomics in 2013 during my PhD in nutritional metabolomics at the University of Reading. I was fortunate enough to be supervised and mentored by Prof. Jonathan Swann who gave me many opportunities to work on a variety of exciting projects. This allowed me to see the tremendous potential of metabolomics applications in clinical and biomedical research.

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

To me one of the most exciting aspects of my work in metabolomics is the collaboration with scientists from diverse backgrounds. The multidisciplinary and complex nature of metabolomics facilitates the exchange of ideas and presents unique opportunities to acquire new knowledge every day. It's always very special when consolidated efforts and expertise result in quality and meaningful outcomes.

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

My research at CY-Biobank involves the integration of metabolomics and genetics data for the identification of composite genotype-phenotype signatures to better understand kidney disease aetiology in population-based studies and facilitate the development of functional biomarkers for disease diagnosis and prognosis.

CY-Biobank is a newly launched biobank and a first venture of its kind in Cyprus. I am working towards facilitating the implementation of metabolomics in the realm of CY-Biobank's activities. Following evidence-based guidelines on the best practices in preanalytical processing and biobanking of samples intended for metabolomics research, I assist in SOP formulation and guide researchers through study design.

Parallel to my work at CY-Biobank, I maintain my collaboration with my colleagues at Imperial College London and an extended network of collaborators across the world working on the application of metabolic phenotyping in global health issues. Together we are investigating the biochemical impact of early life undernutrition and enteropathogenic infections in children living in developing countries to better understand their adverse consequences on growth, cognition and metabolism later in life.

What is happening in your country in terms of metabolomics?

Metabolomics only recently started to become a significant part of the activities of research institutes in Cyprus. This naturally comes with a number of challenges such as the limited access to state-of-the-art infrastructure and expertise and the need to currently outsource most of our metabolomics analyses. It does however present us with opportunities to grow and collaborate with groups abroad. We have recently joined forces with metabolomics labs in Greece due to our geographic proximity and we are actively seeking to participate in European collaborations and other groups abroad.

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

Metabolomics, especially when integrated with other 'omics' methodologies, has a great potential of being used in clinical practice. This is a very exciting albeit ambitious prospect, but I am optimistic that in the near future we will see metabolomics being increasingly

applied in precision medicine for diagnostics, improved patient stratification, and disease management.

As far as our work on the application of metabolomics in infectious diseases and childhood malnutrition is concerned, I am truly hopeful we will be able to inform the construction and better evaluation of nutritional programs and interventions for the developing world.

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

One of the greatest strengths of metabolomics is the proximity of the metabolome to the phenotype capturing signals from genomics, transcriptomics, proteomics and other 'omics'. Another major advantage of metabolomics technologies is their high-throughput nature, allowing a large number of samples to be analysed in a short amount of a time while keeping the costs relatively low.

Finally, being a very multidisciplinary field, metabolomics has the ability to build bridges across several disciplines, connecting scientists with diverse backgrounds, enhancing the generation of novel ideas and providing creative solutions to challenges. This is largely reflected in the exponential growth of the field in the last 10 years.

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

Particular attention should be paid towards the development of improved protocols for standardisation, reproducibility and methodology robustness. From a purely analytical perspective, metabolomics would really take off if more efficient metabolite identification and quantification approaches were developed.

Last but not least, I would like to stress the importance of investing in proper community training and education. This goes for both for the next generation of young metabolomics scientists but also for more experienced investigators implementing metabolomics in their research activities. It is of particular relevance to bioinformatics and chemometrics. Unfortunately, we tend to see an abuse of automated analysis methods and tools that are easy to apply by investigators who have not been adequately trained and do not have the appropriate theoretical understanding to use and report on these methods correctly.

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

Applied metabolomics research is currently well funded but as the field progresses and becomes more mainstream, I would expect to see some changes in the types of projects that receive funding. It is also important to note that funding availability varies widely across different geographical regions. Young metabolomics researchers in particular, working in under-represented regions, often find themselves struggling with limited funding opportunities, which ultimately results in them moving abroad to countries with stronger metabolomics 'hubs'. The field would benefit massively from more training and research grants targeted to early-career researchers (ECRs) in these regions.

What role can metabolomics standards play?


The lack of reporting and performance standards in metabolomics is hindering the progress of the field in many ways. Funding projects centred around metabolomics standards complemented by the existing metabolomics standards networking initiatives will be critical towards developing key benchmarks that would improve transparency, reproducibility and quality in metabolomics research. This will help advance metabolomics applications in clinical, regulatory, and other fields.

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

I couldn't conclude this interview without a reference to the metabolomics early-career community. A goal of mine is to continue to support and mentor ECRs not only through my roles in the Metabolomics Society, but also as a young PI. I would like to encourage any ECRs reading this to get involved with the community and help shape the future of the field. The Metabolomics Society through the Early-career Mentors Network ([EMN](#)) and its dedicated Task Groups ([Scientific task groups](#)/[Other task groups](#)) is a fantastic place to do so and offers unique development and networking opportunities.






I would like to really highlight the importance of building your networks early on in your career and nurturing those networks throughout your career. Seek opportunities to learn from your peers and colleagues.

Metabolomics is not a one-person show and the people you know and work with will be key to your career progression and success.



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Recent Publications

Recently published papers in metabolomics

- [Advanced tandem mass spectrometry in metabolomics and lipidomics-methods and applications](#)
- [Cardiovascular Aging and Physical Activity: Insights From Metabolomics](#)
- [A Cross-Platform Metabolomics Comparison Identifies Serum Metabolite Signatures of Liver Fibrosis Progression in Chronic Hepatitis C Patients](#)
- [Fecal Metabolomics and Network Pharmacology Reveal the Correlations between Constipation and Depression](#)
- [FT-ICR-MS-based metabolomics: A deep dive into plant metabolism](#)
- [The limitless applications of single-cell metabolomics](#)
- [Mass spectrometry-based metabolomics in microbiome investigations](#)
- [Metabolomics analysis of grains of wheat infected and noninfected with *Tilletia controversa* Kühn](#)
- [Metabolomics in Bariatric Surgery: Towards Identification of Mechanisms and Biomarkers of Metabolic Outcomes](#)
- [Metabolomics in Clinical Practice: Improving Diagnosis and Informing Management](#)
- [Metabolomics for the diagnosis of influenza](#)
- [Metabolomics in early life and the association with body composition at age 2 years](#)
- [Metabolomics as a Truly Translational Tool for Precision Medicine](#)
- [New advances in tissue metabolomics: A review](#)
- [Nuclear Magnetic Resonance Spectroscopy in Clinical Metabolomics and Personalized Medicine: Current Challenges and Perspectives](#)
- [PGC-1 \$\alpha\$ mediates a metabolic host defense response in human airway epithelium during rhinovirus infections](#)
- [Plasma Metabolomics Profiling of Metabolic Pathways Affected by Major Depressive Disorder](#)
- [The potential for mitigation of methane emissions in ruminants through the application of metagenomics, metabolomics, and other -OMICS technologies](#)
- [The potential of nuclear magnetic resonance \(NMR\) in metabolomics and lipidomics of microalgae- a review](#)
- [Recent advances in nonalcoholic fatty liver disease metabolomics](#)
- [The robust NMR toolbox for metabolomics](#)
- [Salivary Metabolomics Reveals that Metabolic Alterations Precede the Onset of Schizophrenia](#)
- [Targeted metabolomics identifies high performing diagnostic and prognostic biomarkers for COVID-19](#)
- [A Targeted Serum Metabolomics GC-MS Approach Identifies Predictive Blood Biomarkers for Retained Placenta in Holstein Dairy Cows](#)
- [Yeast-based reference materials for quantitative metabolomics](#)



Metabolomics Events

FEATURED
EVENT



12 November 2021

8th Munich Metabolomics Symposium

Venue

9:00am-6:00pm CEST/3:00am-12:00pm EST, *biocrates life sciences ag*
Hybrid

Overview

Applications of clinical metabolomics in oncology and cardiovascular diseases

We would love to welcome you in person at Klinikum rechts der Isar in Munich, Germany. Participation (online and in person) is free of charge but registration is required. This is a hybrid event (online and in-person). Please note that in-person space is limited.

Register [here](#).

18-21 October 2021

3rd Annual MANA Conference: Foods for Health Discovery

Venue

Virtual Conference, Ohio State University & MANA

Overview

The 18th Annual Ohio Mass Spectrometry Symposium will be held virtually in conjunction with the 3rd annual Metabolomics Association of North America conference (MANA 2021). Join us for “Mass Spec Mornings” on October 19-20, 2021.

If you seek to get your planned metabolomics event endorsed by MANA and receive MANA funds, please [contact us](#)!

Additional information [here](#).

21 October 2021

Life Sciences Startup Fellowship Information Session

Venue

12:00-1:00pm MDT, Innovate Calgary

Virtual

Overview

Learn how you could be a Life Sciences Fellow and receive a \$200k grant to launch and grow your Digital Health or Life Sciences start-up.

The Life Sciences Fellowship delivers funding, life sciences community and product development space, expert advising and professional development programming to support new and emerging ventures that are developing a solution to a compelling need in digital health or life sciences. The program includes salary support to fund a fellow, who has deep technical expertise (Master's level and beyond) and is eager to gain business development experience to lead the company as a senior executive.

Additional information [here](#).

22 October 2021

Canadian Agri-Food Automation and Intelligence Network Competition

Venue

2:00pm MDT, Initial Project Registration Form due

Overview

Are you developing, researching innovative agriculture or food technology? The Canadian Agri-Food Automation and Intelligence Network (CAAIN) is pleased to launch their second nationwide Open Competition. Apply for their \$10M call for agri-food innovation projects by October 22, 2021.

CAAIN is a not-for-profit organization, created with federal support to enable the transition to digital and automated technologies in the agri-food industry. CAAIN does this by connecting agri-food businesses of all sizes with academic and not-for-profit research institutions to leverage their skills, capabilities, and resources for impactful research and innovation projects.

Additional information [here](#).

23 October 2021

Academia to Industry Meeting

Venue

12:00-5:50pm EST, Science to Business Network

Virtual

Overview

Discover emerging trends and exciting career options in the life sciences and biotechnology industries.

Discuss how to best prepare for a career in industry while learning about the necessary skills that can be fostered during graduate work and how they apply in the workforce. Network with professionals with various backgrounds who have had successful careers in the life sciences sector. Forge connections with industry leaders who can provide insight and advice for current graduate students.

Additional information [here](#).

1 November 2021

BIOME Novartis Summit on Cardiovascular Disease

Venue

8:45am-4:35pm MST, Montreal, QC Canada, Novartis
Virtual Community Sessions

Overview

Are you part of a healthcare, pharmaceutical, tech start-up, or a University Research Chair? Novartis is hosting a series of Biome Summits on CVD across Canada, and Toronto is the next site! Join the conversation on November 1st at the BIOME Summit on Cardiovascular Disease.

Additional information [here](#).

1-5 November 2021

Hands-On Mass Spectrometry Course

Venue

Department of Animal Science, Aarhus University, Blichers Allé 20, Tjele, Denmark

Overview

At Aarhus University, Department of Animal Science, we are organizing a “Hands-on mass spectrometry course”, which will give insight in the use of mass spectrometry for a range of analyses with relevance in animal science. The course will take place November 1-5, 2021.

Additional information [here](#).

2 November 2021

Scientific QUEERies: Beyond the Science

Venue

1:00pm MDT, Scientific QUEERies
Virtual

Overview

Scientific QUEERies (<https://sites.google.com/view/scientificqueeries>) invites you to join us on November 2nd, as we welcome Dr. Michael Moloney, CEO of the American Institute of Physics, for a Q&A about finding success in your professional career “beyond the science.”

A proud member of the LGBTQ2S+ community, Dr. Moloney has been a physicist, diplomat, and CEO of one of the largest federations of scientific societies in America, and is ready to share his wisdom with you! Come ready with questions, as we discuss his professional journey and how we can find success in our STEM careers as well.

No registration required. Join the Zoom meeting [here](#).

4 November 2021

A Glimpse Into the Mind of the Life Science Investor

Venue

8:30-11AM PDT/11:30-2PM EDT/5:30-8PM CET
Virtual

Overview

You have an idea, started some experiments, but it is time to move your idea forward and you need seed capital to take those next steps. Where do you go and how do you do it? What operational steps need to be taken?

In this program you will hear from individuals whose companies have successfully raised startup capital and investors who provide those funds.

In collaboration with @svb_financial and @JLABS, Johnson & Johnson Innovation is hosting this webinar to give insider knowledge from life science investors and companies who have successfully raised startup capital.

Additional information [here](#).

15-19 November 2021

Hands-on Data Analysis for Metabolic Profiling

Venue

Virtual Sessions, Imperial College of London

Overview

We offer a comprehensive, hands-on training in processing and analysing metabolomics data from LC-MS and NMR technologies.

Attendees will have the opportunity to:

- Learn directly from internationally recognised leaders in the field;
- Benefit from practical training in computational techniques and statistical methods

This 5 day online course provides a comprehensive overview of data analysis for metabolic profiling studies focussing on data from NMR spectroscopy and Liquid Chromatography-Mass Spectrometry. It combines lectures and tutorial sessions using open source software to ensure a thorough understanding of the theory and practical applications.

Additional information [here](#).

19-20 Nov 2021

World Endocrine & Obesity Conference

Venue

Bangkok, Thailand

Overview

The 2021 World Endocrine and Obesity Conference (2021WEOC) will be organized around the theme 'Endocrine Care through Innovation & Discovery' and will be run as a hybrid model allowing a Virtual and Physical platform.

Local and international speakers will share insights on advancing Endocrinology, Obesity, Diabetes and Metabolism Quality Improvement through Patient and Family Experiences that will present new concepts, technologies, management protocols, and clinical experiences in their respective disciplines.

It will be a wonderful opportunity for all the delegates as it provides an international networking opportunity to collaborate with the world-class trauma and critical care and medical associations.

Additional information [here](#). [Conference Flyer](#)

21-25 November 2021

28th ANSZMS Biennial Conference

Venue

Virtual, Australian and New Zealand Society for Mass Spectrometry

Overview

Participants of ANZSMS28 will discuss contemporary aspects of mass spectrometry relating to chemistry, biology, earth science, archaeology, environmental science, forensics, physics and the latest advancements in mass spectrometry technology and techniques. The program will also include panel discussion forums for early career researchers and mass spectrometry careers in academia and industry. The Australian Core MS Facilities Annual Meeting will be held as a satellite meeting and will use the highly reputable cloud-based OnAir virtual conference portal from EventsAIR to provide the best possible experience to all participants.

This is an event not to be missed!

Additional information [here](#).

2 December 2021

Think Big: From Study Design to Metabolomics Data Interpretation

Venue

*9:00am PST, UC Davis - West Coast Metabolomics Centre
Virtual*

Overview

In this short course, we will discuss pitfalls in study designs that may severely hamper metabolomic studies, shortly reviewing power analyses, bias in studies, biological and chemical controls. We will very briefly review the types of metabolomic assays that give investigators data and problems associated with the choice of assays. Most of the time will be allotted to data interpretation, i.e. what to do once you have received metabolomics data, once data have been curated and once statistics have been completed: how can you then further interpret the data, how to generate new hypotheses, how to link biological data and other -omics data, and how to utilize databases that are available for free online.

Additional information [here](#).

13-16 May 2022**2nd Metabolism in Health and Disease Conference****Venue**

Fiesta Americana Condesa, Cancun, Mexico

Overview

Topics will span diverse areas such as cancer metabolism, organismal metabolism in disease, metabolic pathway engagement in cell function, metabolites as signaling molecules, mitochondrial biology, nutrient sensing, metabolism in tissue homeostasis and repair, neurometabolism, and metabolism in host-microbe interactions.

Additional information [here](#).

29 May - 2 June 2022**19th International GCxGC Symposium****Venue**

Canmore, AB Canada

Overview

Additional information will be available soon.

20-24 June & 20-23 September 2022**CliMetabolomics****Venue**

20-24 June, Leipzig and Halle, France / 20-23 September, Saale, Germany

Overview

CliMetabolomics is a Franco-german Research Workshop that aims to better understand the plasticity of plants and to develop sustainable plants adapted to climate change. CliMetabolomics offers training in analytical tools and an innovation management method to early career scientists. The workshop lasts two weeks and consists of seminars, discussions and many practical courses.

Additional information [here](#).

26-27 October 2022

2nd International Diabetes and Metabolic Surgery Summit

Venue

Tel Aviv, Israel, IDMSS

Overview

The focus of the forthcoming IDMSS 2022 will be the relationship between obesity and type 2 diabetes and their associated complications and the beneficial results obtainable from metabolic/ bariatric surgery. This Summit is therefore vital to increase the international knowledge of these procedures and stimulate the investigation and development of new and more effective treatments. The Summit will bring together many of the world experts in the fields of metabolic surgery and medicine and is a must for all clinicians caring for patients suffering from metabolic diseases.

Additional information [here](#).

Metabolomics Jobs

If you have a job to post, please email your MetaboNews team at (metabolomics.innovation@gmail.com).

Jobs Offered

Job Title	Employer	Location	Posted	Closes	Source
Sr. Marine Education Specialist - Science Technology Centre (STC)	Woods Hole Oceanographic Institution	Massachusetts, USA	4-Oct-21	Until Filled	Careers@WHOI
Digital Coordinator	Woods Hole Oceanographic Institution	Massachusetts, USA	4-Oct-21	Until Filled	Careers@WHOI
PDF Position	Fernandez Lab, School of Chemistry and Biochemistry, Georgia Institute of Technology	Georgia, USA	Sep-21	Until Filled	Fernandez Lab
Team Leader for Computational Metabolomics	Pacific Northwest National Library (PNNL)	Washington, USA	Sep-21	Until Filled	Careers at PNNL
Senior Computational Metabolomics Scientist	Pacific Northwest National Library (PNNL)	Washington, USA	Sep-21	Until Filled	Careers at PNNL
Various Positions	Various	Various	Sep-21	Various	Metabolomics Association of North America Job Board

Job Title	Employer	Location	Posted	Closes	Source
Metabolomics of Algae - Post-doctoral Fellowship	Cawthron Institute	Nelson, New Zealand	10-Jun-21	Until Filled	Cawthron Institute
Senior/Principal Research Associate, Metabolomics	Calico Life Sciences	South San Francisco, CA, USA	26-Apr-21	Until Filled	Calicolabs.com
PhD Student and Post-doctoral Fellow Positions in Mass Spectrometry Metabolomics and Proteomics	Technion – Israel Institute of Technology	Haifa, Israel	29-Mar-21	Until Filled	MetaboNews Jobs
Postdoctoral R&D Scientist - NMR-based metabolomics	Lesaffre	Loos, France	16-Mar-21	Until Filled	SmartRecruiters.com
PhD Research Project Opportunities, Centre for Integrative Metabolomics and Computational Biology	Edith Cowan University	Joondalup, Australia	16-Mar-21	Until Filled	Edith Cowan University

Jobs Wanted

This section is intended for very highly qualified individuals (e.g., lab managers, professors, directors, executives with extensive experience) who are seeking employment in metabolomics.

We encourage these individuals to submit their position requests to your MetaboNews team at (metabolomics.innovation@gmail.com). Upon review, a limited number of job submissions will be selected for publication in the Jobs Wanted section.

- [Dr. Paulina Samczuk](#) - Seeking an interesting Postdoc offer or other position which would allow her to develop herself.