

In This Issue

PAGE

- 1** Metabolomics Society News
- 4** Spotlight **TRANSVAC2**
- 7** Recent Publications
- 8** Conferences & Events
- 20** Jobs & Collaborations

Welcome to the June 2018 issue of MetaboNews!

It's conference time! This month marks the advent of the annual Metabolomics Society Conference in Seattle, USA. We are excited to highlight all this month's updates as we lead into Metabolomics2018. As always, do please reach out to the editors with suggestions, ideas and content at any time.

Metabolomics Society News

Metabolomics 2018 Updates

Final plans are being made for the 14th Annual Conference of the Metabolomics Society in Seattle, Washington, USA, on June 24-28, 2018. The Society's annual conference will feature the latest and greatest advances across the full range of metabolomics science. Make sure to join us as we meet in Seattle, a world-class metropolis set within the beautiful, natural surroundings of the Pacific Northwest. **Registration is still open at <http://metabolomics2018.org/>.**

The conference will feature **27 scientific sessions** across the metabolomics field as well as **15 Workshops**, some of which are still available for signup as part of the Registration process. **20 Plenary and Keynote talks** along with the scientific program can be viewed on the conference website.

In addition, **8 networking and other events** have also been announced, including a Forum on Metabolomics Research Cores, a Town Hall Forum, and events for the Early Career Members Network, Pacific Rim scientists and the Metabolomics Association of North America. And don't miss out on the exciting conference dinner to be held at the Museum of Popular Culture (MOPOP). See you in June in Seattle!

Metabolomics 2019

Metabolomics 2019 will be organized in the World Forum in The Hague, The Netherlands. It is the Hague's largest convention center and very close to the seaside. "The Netherlands Metabolomics Centre (NMC) is proud that the Hague has been chosen as the European destination for the 15th Annual Conference of the Metabolomics Society. The conference will take place over five days on June 24-28, 2019," explains Merlijn van Rijswijk, director of NMC and Chair of the Scientific Organizing Committee.

"In the conference we will put a strong emphasis on the applications of metabolomics and collaborate with other national societies in Europe and beyond, to make as many travel grants available for young researchers as possible. We will be reaching out to other communities, for instance the Biobanking community in Europe that is increasingly applying metabolomics in its research, but not doing the analyses themselves. Therefore, we expect to attract a record number of attendees from all over the world," says Thomas Hankemeier, Scientific Director of NMC and Chair of the Local Organizing Committee.

Ian Forsythe
Editor

Department of Computing Science
University of Alberta, Canada
metabolomics_innovation@gmail.com

Devin Benheim

Contributing Editor
Department of P,A&M
La Trobe University, Australia
devin.benheim@anzmet.org



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



Jules Griffin
Metabolomics Society
President



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

General Enquires

info@metabolomicsociety.org

Membership Enquiries

membership@metabolomicsociety.org

Board of Directors

Words From the President

This month, top of the agenda was the election of honorary fellows to the Society. This is our most prestigious award for the society and, while I have been sworn to secrecy in terms of the results, we had some excellent candidates. I wish to extend a big thank you to all those that nominated the great and the good from the community. I look forward to presenting these awards in Seattle.

However, for most of us, we still have a few (or quite a few) years to go before we reach these dizzy heights. So, the Board has been discussing the creation of two further sets of awards, which we hope to launch in Seattle aimed at Early-Career and Mid-Career scientists who have either served the community well or made a significant scientific impact on the field. These awards are amongst the news we will discuss in the planned Town Hall Meeting for the Society, which will be held on Tuesday 26th June in Seattle. If you missed this bit of news from a past edition of MetaboNews, the Officers of the Society will be holding an informal meeting to let you know how the Society is performing and what we feel our members' needs are. We are largely basing the latter on a very successful members' survey at the end of the Brisbane meeting but it's quite possible this survey may have missed things so please come along with your suggestions as to how the Society can help you. This is the last Board of Directors meeting ahead of the Seattle meeting so I would like to wish everyone attending safe travels and see you all in Seattle.

Members Corner

Early-Career Members Network (EMN)

EMN Webinar Series – 2018

An EMN webinar was held on May 29, 2018. **Prof. Gary Siuzdak** (The Scripps Research Institute, USA) presented "Activity Metabolomics: Technologies to identify metabolites that modulate phenotype."

The next EMN webinar with **Prof. Kazuki Saito** (RIKEN Center for Sustainable Resource Science, Japan) is planned for the end of July. Stay tuned for details.

EMN Workshops at the 14th Annual International Conference of the Metabolomics Society

EMN will host two major activities in the conference: the EMN workshops on Sunday to Monday and an EMN reception on Tuesday evening.

Workshops: The EMN will host four workshop sessions at the conference center. Three of these (Experimental Design, Introduction to MS and Multivariate Statistical Analysis) will be held on Sunday 24th June in the afternoon, and a Career Workshop will be held on Monday 25th June in the morning. These workshops are tailored for the needs of early-career scientists who are new to the metabolomics field. If you attend the conference, please join us! For more detail, please check the website <http://metabolomics2018.org/program/workshops>.

EMN Reception: A free reception event will be held on Tuesday 26th June in the evening at the conference center. We welcome all students and early-career scientists to join this social event to meet each other, build the network and strengthen the community. Drinks and light food will be provided. Please join us at Metabolomics 2018, Seattle!

International Affiliates Corner

Netherlands Metabolomics Centre (NMC)

Visit www.metabolomicscentre.nl/

€17 million for Netherlands X-omics Research Infrastructure

The Netherlands X-omics (pronounce as cross-omics) initiative has been awarded a € 17 million (USD 20 million) Infrastructure grant over a five-year period, which is matched by similar investments from all parties involved. In the X-omics initiative, the leading researchers in metabolomics (Thomas Hankemeier, Leiden University), proteomics (Albert Heck, Utrecht University), genomics (Edwin Cuppen UMC Utrecht) and bio-informatics (Alain van Gool, Radboud UMC) are working together.

Thomas Hankemeier: "We are going to expand the capabilities of the individual omics technologies, to improve sensitivity, coverage and quality. We will work towards smaller sample volume, larger sample numbers and reduced costs. In addition, we will put a strong emphasis on the integration of omics data, to study the interplay and dynamics between genes, proteins and metabolites. More information and a video is available at www.x-omics.nl

Other News

Call for nominations for Directors of the Metabolomics Society

In the next few months, the Metabolomics Society will undertake the annual process of nominating and electing new members to serve on the Society's Board of Directors. We strongly encourage all Society members to play a role in nominations and elections.

Expectations for Directors Appointment

The Society is led through the voluntary efforts of the Board of Directors. While this provides motivated individuals a fantastic opportunity to contribute to the activities, communications, and ultimately growth of our metabolomics community, it also requires a time commitment of typically two hours per week. In addition to tasks orchestrated through the monthly Board Meeting, each Director is expected to serve on at least two committees or task groups, and, in many cases, to lead and chair such a group (for the current committees and task groups, see <http://metabolomicssociety.org/>).

Nominations process

Full details of the nominations process will be made available on the Society's website in the near future. Please keep in mind that the Society is an international organization involved in a wide range of subjects in the field of metabolomics. Our directors will serve us best if they reflect the diversity of backgrounds, expertise, interests, and geographic distribution of the many individuals who comprise our membership. In brief, (1) all individuals nominated must be current members of the Metabolomics Society, and (2) at least two members of the Society must support the individual's nomination.

If you wish to nominate an individual to stand for election to the Board of Directors, please fill in the [form available here](#). Nominees will be required to provide a short biography and statement of purpose by the end of July.

Please contribute to shaping the future of our Society by voting and playing an active role.

The advertisement features a blue background with a blurred image of laboratory glassware. On the left, the 'CHENOMX' logo is displayed in white text next to a green circle containing a yellow dot. Below the logo, the website 'www.chenomx.com' is written in white on a yellow rectangular background. To the right, the text 'NMR ANALYSIS YOU CAN TRUST' is written in white. In the bottom right corner, there is a screenshot of the ChenomX software interface, which shows a complex NMR spectrum with multiple peaks and a chemical structure of a molecule.

SpOtlight



TRANSVAC2 and opportunities for vaccine metabolomics *European Vaccine Research and Development Infrastructure*

Strengthening the European vaccine landscape by bridging the translational gap in biomedical research is key to accelerate the development of effective vaccines that are urgently needed to address global health challenge.

In order to promote innovation in vaccine development and facilitate access to the knowledge and expertise available in Europe, the infrastructure and development project TRANSVAC2, coordinated by Dr Odile Leroy (executive director of the European Vaccine Initiative) has recently received funding under the European Commission's Horizon 2020 Research Programme.

In the long term, TRANSVAC2 aims to establish a fully operational and sustainable vaccine Research and Development (R&D) infrastructure in Europe by fostering cooperation between public vaccine R&D institutions of excellence, related initiatives and networks, and industrial partners. The project builds upon the success of its predecessor TRANSVAC, the European Network of Vaccine R&D funded under the EC's previous Framework Programme (FP7).

TRANSVAC2 will support the development of prophylactic and therapeutic vaccines for both human and animal use.

High-quality technical services across four different platforms will be offered:

- 1) Technology (for process development and GMP production)
- 2) Immunocorrelates & systems biology
- 3) Animal models
- 4) Support for clinical trials

Academic and non-academic research groups can apply to benefit from the expertise, reagents, and facilities offered by the TRANSVAC2 partners to accelerate the development of their vaccine candidates. An independent scientific peer review process will guarantee the scientific excellence and quality of the selected applications. The call for applications is planned to be launched in October 2017. Technical services in TRANSVAC2 will be further strengthened by joint research activities that will develop and apply cutting-edge technologies to address critical issues in modern vaccine development and thereby increase the quality of the services provided.

More specifically TRANSVAC2 offers exciting research opportunities for metabolomics under the platform immunocorrelates & systems biology. Through the TNA activities of TRANSVAC2 researchers interested in characterising the metabolic consequences and/or interactions of new vaccine candidates or vaccine formulations can apply for metabolomics services offered by Leiden University, fully subsidized by this program.



[Click Here for a Brief Video Covering the TRANSVAC Initiative](#)

Spotlight | TRANSVAC2

As this is a European initiative, preference will be given to applications from Europe or associated countries; however 20% of the services can be allocated to other countries. The metabolomics facility in Leiden utilises targeted biologically driven metabolomics platforms covering the metabolome ranging from the central carbon metabolism, microbiota metabolites, biogenic amines, lipids (free fatty acids, glycerophospholipids, sphingomyelins and triglycerides), signalling lipids (eicosanoids, endocannabinoids) and peroxidised lipids (isoprostanes). For more detailed metabolomics coverage information, please visit www.bmfl.nl.

Originally, cell metabolism has been viewed as a static process that simply fuels biological processes through anabolism and catabolism, but has since also been recognised as a core process regulating cellular development, proliferation and differentiation. More recently it has been shown that immune cell functions are governed by cellular metabolism and their metabolic intermediates. Furthermore, the microbiota have been implicated as a critical regulator of human physiology and immunological responses through interacting with the host via a “metabolic bridge”. These immune-metabolic and microbiota-host metabolic interactions remain largely unexplored fields in terms of vaccine responses and vaccine development. Hence, metabolomics approaches provide a powerful and underutilised tool in the field of vaccine research and development. Its applicability ranges from *in vitro* to *in vivo* studies. The complementary nature of metabolomics to especially animal model studies in the vaccine field make it an attractive option for improved vaccine response characterisation.

Comprehensive information regarding TRANSVAC2 can be found on the website <http://transvac.org/> and through contacting the coordinators (transvacinfo@euvaccine.eu). Researchers interested in exploring metabolomics studies within the TRANSVAC2 framework are encouraged to get in touch with Dr Nelus Schoeman at j.c.schoeman@lacdr.leidenuniv.nl (Leiden University) prior to application. Important considerations that need to be discussed prior to applications include: study design, sample type, sample volumes and other critical parameters.

Partners:

- European Vaccine Initiative (the Coordinator)
- Bioaster
- Biomedical Primate Research Centre
- Commissariat à l’Energie Atomique
- European Advanced Translational Research
- Infrastructure in Medicine
- European Clinical Research Infrastructure Network
- Fraunhofer Institute for Molecular Biology and Applied Ecology
- GenIbet
- Helmholtz Centre for Infection Research
- Institut de Recerca i Tecnologia Agroalimentàries
- Institut National de la Recherche Agronomique
- Institute for Translational Vaccinology
- Instituto de Biología Experimental e Tecnológica
- Integrated Structural Biology Infrastructure for Europe
- Leiden University Medical Centre
- Leiden University
- London School of Hygiene and Tropical Medicine
- Public Health England and Medicines and Healthcare Products Regulatory Agency
- Sclavo Vaccines Association
- Statens Serum Institut
- Swiss Federal Institute of Technology in Zurich
- University of Lausanne
- University of Oxford
- University of Siena
- Vaccine Formulation Institute
- Wageningen Bioveterinary Research Institute

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 730964.

THE AUSTRALIAN & NEW ZEALAND METABOLOMICS CONFERENCE 2018

FEATURING:
**'Introduction to
Metabolomics'
Lecture Series !**

Early Bird Rate
Extended Until
Friday 29th June
2018!

30 AUG - 1 SEP 2018
UNIVERSITY OF
AUCKLAND



Dr Janine Cooney
The New Zealand
Institute for Plant and
Food Research Ltd



Prof Ute Roessner
University of
Melbourne, AUS



Dr Horst Schirra
University of
Queensland, AUS



A/Prof Sanjay Swarup
National University of
Singapore, SG



A/Prof Silas Villas-Boas
University of
Auckland, NZ



Prof David Wishart
University of
Alberta, CAN



www.anzmet.org

Recent Publications

Recent Publications

Recently published papers in metabolomics

- [Metabolic biomarkers of ageing in C57BL/6J wild-type and flavin-containing monooxygenase 5 \(FMO5\)-knockout mice](#)
- [Fecal transplant from resveratrol-fed donors improves glycaemia and cardiovascular features of the metabolic syndrome in mice](#)
- [Validation of biomarkers of food intake-critical assessment of candidate biomarkers](#)
- [Non-invasive staging of chronic kidney allograft damage using urine metabolomic profiling](#)
- [MetaboAnalyst 4.0: towards more transparent and integrative metabolomics analysis](#)
- [A pharmaco-metabolomics approach in a clinical trial of ALS: Identification of predictive markers of progression](#)
- [A metabolomics study of BPTES altered metabolism in human breast cancer cell lines](#)
- [Splenectomy leads to amelioration of altered gut microbiota and metabolome in liver cirrhosis patients](#)
- [Proteo-metabolomics reveals compensation between ischemic and non-injured contralateral kidneys after reperfusion](#)
- [Pharmacotherapy of schizophrenia: toward a metabolomic-based approach](#)



Metabolomics Events



25-28 June 2018

Metabolomics 2018

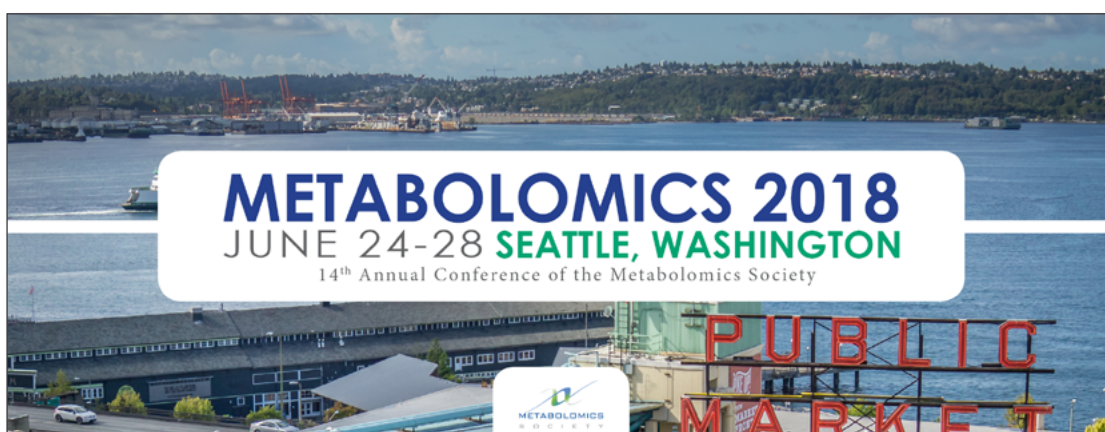
Venue:

Washington State Convention Center, Seattle, Washington, USA

We are delighted to invite you to the **14th International Conference of the Metabolomics Society**, which will be held in Seattle, Washington, USA, June 24-28, 2018, at the Washington State Convention Center in downtown Seattle. The Convention Center boasts award winning catering, nearby accommodations and dining options within easy walking distance, direct air connections to major cities worldwide and excellent local transportation. Seattle, in addition to being situated in the beautiful Pacific Northwest, is a major hub for science and technology, and is home to more than 25 research institutions and many major companies with global reach.

The conference has an overall goal of **Making Connections**, with major scientific themes of systems biology, big data, technology advances, precision medicine and translational science, plant metabolomics, the microbiome, and the exposome, including environmental and nutritional metabolomics. In addition, the conference will provide many networking opportunities to help establish connections for early career scientists and metabolomics scientists across the Pacific Rim as well as globally.

For further information, please visit <http://metabolomics2018.org/>.



Metabolomics Events



23-25 July 2018

Multiple biofluid and tissue types:

From sample preparation to analysis strategies for metabolomics

Venue:

Birmingham Metabolomics Training Centre, School of Biosciences, University of Birmingham, Birmingham, UK

Limited bursaries are now available for PhD students funded by NERC, which make the registration for this course FREE to these students.

This 3-day course will provide a comprehensive overview of dealing with complex biological samples for LC-MS analysis. The course is targeted towards students and researchers who are actively applying metabolomics in their research. The course will be led by experts in the field and include:

- An overview of quenching and extraction strategies for different biological samples
- Hands-on sample preparation using different sample types
- Hands-on HILIC and reversed phase LC-MS data acquisition
- Solid phase extraction clean up methods
- An overview of data analysis and metabolite identification
- An opportunity to ask questions and seek advice to prepare samples in your own research

For further information and registrations details, please visit <http://www.birmingham.ac.uk/facilities/metabolomics-training-centre/courses/introduction-metabolomics.aspx> or contact bmtc@contacts.bham.ac.uk



6-9 Aug 2018

1st Annual North American Mass Spectrometry Summer School

Venue:

University of Wisconsin-Madison, Madison, Wisconsin, USA

Organizers:

Josh Coon, Mike Sussman, Lingjun Li, and Dave Pagliarini

Thank you for your interest in the 1st Annual North American Mass Spectrometry Summer School held on the University of Wisconsin-Madison campus.

While we anticipate many of our participants to be graduate students or postdocs, we encourage anyone interested in learning more about mass spectrometry to apply.

Please keep in mind as you continue, that the following application only shows your interest in participating in the Summer School. Once completed, the Organizers will consider all applications and accept students on a rolling basis.

Metabolomics Events

The NSF- and NIGMS- funded [North American Mass Spectrometry Summer School](#) (August 6-9, 2018 at University of Wisconsin, Madison) invites applications for travel grants. **A maximum of 50 scholars will receive accommodation, and 10 scholars will receive funds to cover airfare.** Decisions will be based on scientific justification to receive training, scholarly excellence (for different levels of experience), funding need and alignment with NSF- and NIH- criteria (encouraging applications from scientists from underrepresented minorities). **Applications end by April 1st, 2018** but decisions are made on a rolling basis - apply early!

[Conference Flyer](#)

For more information about the Summer School, visit <https://uwmadison.eventsair.com/massspectrometry/reg/Site/Register>



26-28 Aug 2018

1st Nordic Metabolomics Conference

Venue:

Aula Nova, Örebro University, Sweden

Welcome to the 1st Nordic Metabolomics Conference, which is the inaugural annual meeting of the newly established Nordic Metabolomics Society.

The conference aims to highlight and discuss the latest metabolomics research in Nordic countries and abroad. The meeting will start with a welcome reception in the evening of Sunday, August 26th and end in the afternoon of August 28th. The meeting will also host the 1st General Assembly of the Nordic Metabolomics Society.

Most of the talks for the conference programme will be selected from the submitted abstracts.

Key dates and information

- Registration and abstract submission opens: March 1st, 2018
- Deadline for early bird registration: June 30th, 2018
- Abstract submission deadline: May 14th, 2018 (for poster abstracts, submission for oral abstracts is closed)
- Final programme posted: May 31st, 2018
- Over 15 travel awards of 5000 SEK will be available, supported by the Örebro University and the Nordic Metabolomics Society. You can apply for the award as apart of the abstract submission process. Eligibility: student or postdoc, with submitted abstract.

For more information, visit <https://www.oru.se/english/about-us/conferences/nordic-metabolomics-conference/>.



27-31 Aug 2018

Introduction to Ecometabolomics for Ecologists

Venue:

Institute of integrative biodiversity research (iDiv), Leipzig, Germany

- When: 27-31 August 2018 (full day)
- Cost: No participation fees; only travel and hotel costs
- Content: lectures, discussions, student presentations; hands on: sampling, laboratory experiments, data analysis

The course will provide an overview about the application of metabolomics in ecological and biodiversity research. We will explore the tools and approaches that are used to obtain, process, and analyse metabolomics data. The course will be delivered using a combination of lectures, computer-based practical sessions with test data sets, group discussions, and hands-on practical exercises in the lab. Especially PhD students who are interested in performing or already plan to implement metabolomic analysis for their ecological and biodiversity research are invited.

Where can I apply?

For Application please contact: Henriette.uthe@idiv.de. Please add a short letter about why you want to take part in this course and what you expect to learn.

Furthermore, we will award two grants to cover travel and hotel costs.
Don't hesitate to contact Henriette Uthe for more Information.

Deadline for application: 1 July 2018

For further information and registrations details, please visit https://www.idiv.de/ydiv/courses_and_training/introduction_to_ecometabolomics_for_ecologists.html



30 Aug - 1 September 2018

The Australian & New Zealand Metabolomics Conference

Venue:

University of Auckland, New Zealand

Featuring: The Introduction to Metabolomics Lecture Series!

The essence of any conference lies in community-building. A meaningful conference is a safe, supportive and open environment aimed at fostering growth, awareness and learning – and should be attendee-driven. These key ingredients for ‘reengineering the traditional conference’ are the basis and inspiration behind developing ANZMET as the **first peer-driven scientific conference in Australia**. The conference hosts a blend of traditional presentations, roundtable discussions and peer sessions, providing a flat hierarchy and a rich & rewarding interpersonal process.

Following on from the success of the first ANZMET conference in 2016, and its satellite event/workshop held during the Metabolomics2017 conference in Brisbane, Australia, it is with great pleasure and excitement that we continue to develop the peer-conference model and reach out to the dynamic and supportive people of the Australian & NZ metabolomics community.

The ANZMET conference is designed from conception as a community-owned event and provides a **facilitated networking experience** where:

- (1) Attendees learn on the first day of each others interests, experience, scientific background, collaboration opportunities and other avenues for outreach
(**The Round-table Discussion**)
- (2) An open-forum format for rich discourse on spontaneous peer-selected topics
(**The Peer Session**)
- (3) The delivery of critical updates in the field (**Traditional Presentations**)
- (4) The tailored and vital exposure of young scientists to the wider research community
(**Rapid-fire Postgraduate Presentation Sessions**)

Registrations are **NOW OPEN!** Please visit <http://www.anzmet.org/>.



Metabolomics Events



9 - 12 September 2018

MOVISS – The Mountain Village Science Series

Venue:

Vorau, Austria

MOVISS – the “Mountain Village Science Series” takes place in Vorau, Austria (Sep 9-12, 2018). MOVISS is different to the usual conferences. It is designed as a small, problem-driven meeting, full of discussions and questions about how to deal with metabolomics data reasonably. In this way, we hope to constructively engage some of the greatest minds collaboratively on solving some of the challenges of the metabolomics and bioinformatics community. Together with hiking tours and social program, MOVISS is planned to be friendly and relaxing meeting for scientists interested in the fields of metabolomics and statistics.

To register and for more information, go to www.MOVISS.eu and follow us on Twitter [@MOVISSmeet](https://twitter.com/MOVISSmeet). We will have a shuttle bus to take people to and from the airport; for details, please see the website.



18 - 20 September 2018

Benelux Metabolomics Days and Kick-Off ELIXIR Metabolomics Community

Venue:

Rotterdam, The Netherlands

Benelux Metabolomics Days

On September 19 and 20, 2018, NMC will organize for the first time the “Benelux” Metabolomics days in Rotterdam, The Netherlands. It is for the first time that researchers from Belgium, The Netherlands and Luxemburg meet, but of course this meeting will be very interesting and open to all other European researchers performing and applying metabolomics in their research. The entire meeting will be in English. It is our intention to organize annual Benelux meetings, in years that the global metabolomics conferences are not being held in Europe. Visit the conference website for more information and registration!

Kick-off ELIXIR Metabolomics Implementation Study

Recently funding for a European ELIXIR Metabolomics community was acquired, uniting researchers in the UK, France, Belgium, The Netherlands, Germany, Sweden, Spain, Greece, Italy, Switzerland, Estonia and the ELIXIR-hub. ELIXIR is a European research infrastructure, that brings together life science resources from across Europe, which include databases, software tools, training materials, cloud storage, and supercomputers. The goal of the ELIXIR Metabolomics community is to work with experimental scientists and developers to provide the resources, analysis tools, and infrastructure that will help metabolite identification. The community will also establish an infrastructure of services, standards, and datasets to help researchers discover, annotate, and analyse metabolomics data from around Europe. On September 18 (evening) and 19 (morning), the kick-off of this Implementation Study will take place, just prior to the Benelux Metabolomics days.

More information: <https://www.elixir-europe.org/communities/metabolomics>



19-21 Sept 2018

Introduction to Metabolomics for the Microbiologist

Venue:

Birmingham Metabolomics Training Centre, School of Biosciences
University of Birmingham, Birmingham, UK

Limited bursaries are now available for PhD students funded by NERC, which make the registration for this course **FREE** to these students.

This three-day course will introduce the attendees in how untargeted metabolomics can be applied to study microbial systems in academic and industrial research. The course will provide an overview of the metabolomics pipeline from experimental design to sample preparation and data acquisition to data analysis/interpretation.

The course will be led by experts in the field of metabolomics and will include lectures, hands-on laboratory sessions in sample preparation and data acquisition and computer workshops focused on data processing and data analysis.

Topics covered:

- Introduction to metabolomics, both targeted and untargeted approaches
- Experimental design and the importance of quality control samples in untargeted metabolomics
- Analytical strategies applied in metabolomics with a focus on mass spectrometry
- Hands-on laboratory sessions focused on sample preparation and to include metabolic quenching and extraction procedures, intracellular and exometabolome samples and polar and non-polar extraction methods
- Hands-on laboratory sessions focused on sample analysis for untargeted metabolomics studies using an Acquity UPLC coupled to a Xevo QToF mass spectrometer
- Hands-on workshop focused on data processing and data analysis
- Hands-on workshop focused on an introduction to metabolite identification
- Question and answer session with the experts

Level:

The course is aimed at individuals with minimal experience of applying metabolomics in their research and no or limited experience of using a liquid chromatography – mass spectrometer. The attendees will leave the course understanding and being able to apply the metabolomics pipeline in their research.

For more information and to register, please visit <https://www.birmingham.ac.uk/facilities/metabolomics-training-centre/courses/introduction-metabolomics-microbiologist.aspx>



27-28 Sep 2018

Introduction to Metabolomics for the Environmental Scientist

Venue:

Birmingham Metabolomics Training Centre, School of Biosciences, University of Birmingham, Birmingham, UK

Bursaries for NERC funded scientists: While this course is open to all researchers with an interest in the environmental sciences, it is a NERC-funded Advanced Training Short Course and hence priority will be given to NERC funded scientists; this includes NERC PhD students (highest priority), NERC PDRA's and Fellows (next highest priority) and principal and co-investigators who currently hold NERC funding.

This 2-day NERC-funded Advanced Training Short Course will provide environmental scientists with an overview of the metabolomics pipeline. The course is intended for environmental scientist with little or no previous experience of metabolomics and who are interested to discover how this relatively new and powerful approach could be integrated into their research. Experts working in the NERC Metabolomics facility-NBAF-Birmingham will teach the course.

Topics covered:

- Introduction to environmental metabolomics with case studies
Experimental design and quality control
- Sample collection and preparation
- Overview of analytical laboratory techniques
(mass spectrometry and NMR spectroscopy)
- Overview of data processing and statistics for metabolomics
- Introduction to metabolite identification

For further information and registration details, please visit <https://www.birmingham.ac.uk/facilities/metabolomics-training-centre/courses/introduction-metabolomics-environmental.aspx> or contact bmtc@contacts.bham.ac.uk

Metabolomics Events

SardegnaRicerche **1-5 Oct 2018**

4th Metabolomics Sardinian Summer School: "Nutritional Metabolomics"

Venue:

Polaris Technology Park, Pula, Sardinia, Italy

Course Objectives and Targets

Participants will attend theoretical sessions with lectures by experts, and hands-on data analysis aimed to deepen the theoretical and practical knowledge for using the main tools available to better understand the role of nutrition in health and disease. The School is mainly targeted to researchers at an early stage in their career (but not only), from Biological Sciences, Health Sciences and other different background (including bioinformatics) who are interested in learning about both technical and bioinformatics tools to be applied on Nutritional Metabolomics

Participants will learn about:

- How to design a metabolomics experiment;
- How to measure nutritional and metabolism biomarkers;
- How to find correlations between dietary habits and health.

Main Topics

- NMR and MS in Foodomics and Nutrition
- Ion Mobility techniques in lipids analysis.
- Statistics, Data fusion and Data integration
- Metabolomics, Microbiome and Nutrition
- Metabolomics: beyond biomarkers and towards mechanisms
- New challenges in Human Nutrition
- Lipidomics in Nutrition

Daily lectures and hands-on sections, plus poster and oral presentations from participants

Applications

The course is funded by the Regional Sardinian government and registration will be free of charge for all attendees. Selection will be based on CV and a letter stating the motivations for attending the course and future research plans of candidates. A letter of reference from the current supervisor must also be attached to the application. Registration includes course material, lunches and coffee breaks (not accommodation expenses). For selected participants contribution or reimbursement will be considered.

Organizing Committee

- Atzori Luigi, Università Cagliari, Cagliari, Italy (latzori@unica.it)
- Caboni PierLuigi, University of Cagliari, Italy (caboni@unica.it)
- Griffin Jules, University of Cambridge, Cambridge, UK (jlg40@cam.ac.uk)
- Pieroni Enrico, CRS4, Pula, Italy (ep@crs4.it)

Summer School Secretariat: nutrimet2018@gmail.com

For detailed information about the Summer School in Sardinia, visit:

[Nutritional Metabolomics School 2018.](#)

Metabolomics Events



8-12 Oct 2018

Workflow4Experimenters 2018 Course:

Analyze your LCMS, GCMS and NMR data with Galaxy and the Workflow4Metabolomics online platform

Venue:

Paris, France

During this “Bring Your Own Data” one-week course at the center of Paris (France), you will use Galaxy and the Workflow4Metabolomics online platform (W4M) to analyze your own LC-MS, GC-MS, or NMR data set. Morning sessions will be dedicated to methodology and tools. Afternoon sessions will be devoted to tutoring on your data.

Invited speakers: Christoph Steinbeck (Friedrich Schiller University - Jena) and Julien Bocard (University of Geneva)

Organization: Infrastructures for bioinformatics (ELIXIR-FR, IFB) and metabolomics (MetaboHUB).

Registrations: <http://workflow4metabolomics.org>

Contact: contact@workflow4metabolomics.org



8 Oct - 2 Nov 2018

Metabolomics Data Processing and Data Analysis

Venue: Online

This online course will explore the tools and approaches that are used to process and analyse metabolomics data, we will investigate the challenges that are typically encountered in the analysis of metabolomics data and provide solutions to overcome these problems. The course will be delivered using a combination of short videos, articles, discussions, and online workshops with step-by-step instructions and test data sets. We will provide quizzes, polls and peer review exercises each week, so that you can review your learning throughout the course.

Course Syllabus:

- An introduction to metabolomics
- An overview of the untargeted metabolomics workflow
- The influence of experimental design and data acquisition on data analysis and data quality
- Processing of NMR data

Metabolomics Events

- Processing direct infusion mass spectrometry data
- Processing liquid chromatography-mass spectrometry data
- Reporting standards and data repositories
- Data analysis, detecting outliers and drift, and pre-treatment methods
- Univariate data analysis
- Multivariate data analysis (including unsupervised and supervised approaches)
- The importance of statistical validation of results
- Computational approaches for metabolite identification and translation of results into biological knowledge
- What are the future challenges for data processing and analysis in metabolomics

Level:

The course would be ideally suited to MSc/PhD students or scientists who are in the early stages of analysing metabolomics data. No previous knowledge of the data processing and statistical analysis approaches is assumed, but a basic understanding of the metabolome, and the analytical techniques applied in the metabolomics field would be beneficial. A pre-course recommended reading list will be provided.

For further information and to register, please visit <https://www.birmingham.ac.uk/facilities/metabolomics-training-centre/courses/Metabolomics-Data-Processing-and-Data-Analysis.aspx>



22 Oct 2018

Introduction to Metabolomics for the Clinical Scientist

Venue:

Birmingham Metabolomics Training Centre, School of Biosciences
University of Birmingham, Birmingham, UK

This 1-day course in partnership with the Phenome Centre Birmingham will provide clinicians with an overview of the metabolomics pipeline, highlighting the benefits of the technique to the medical field. The course will provide an:

- Introduction to experimental design and sample collection
- An overview of both the analytical and computational methods applied in the field
- Case studies and panel discussions with the experts

For further information and registrations details, please visit <http://www.birmingham.ac.uk/facilities/metabolomics-training-centre/courses/introduction-metabolomics.aspx> or contact bmtc@contacts.bham.ac.uk

Metabolomics Events



19-21 Nov 2018

Metabolomics with the Q Exactive

Venue:

Birmingham Metabolomics Training Centre, School of Biosciences
University of Birmingham, Birmingham, UK

This 3-day course will introduce you to using the Q Exactive mass spectrometer in your metabolomics investigations. The course is aimed at students and researchers with minimal previous experience of applying LC-MS in metabolomics. The course will be led by experts in the field and include lectures, laboratory sessions and computer workshops to provide:

- An introduction to metabolomics and using the Q Exactive mass spectrometer in your studies
- Polar and non-polar sample preparation for profiling and targeted studies
- Data acquisition for profiling and targeted studies
- Data processing and data analysis
- Introduction to metabolite identification

The course will finish with a question and answer session with a panel of experts.

For further information and registrations details, please visit <http://www.birmingham.ac.uk/facilities/metabolomics-training-centre/courses/introduction-metabolomics.aspx> or contact bmtc@contacts.bham.ac.uk



22-23 Nov 2018

Metabolite identification with the Q Exactive and LTQ Orbitrap

Venue:

Birmingham Metabolomics Training Centre, School of Biosciences, University of Birmingham, Birmingham, UK

Limited bursaries are now available for PhD students funded by NERC, which make the registration for this course **FREE** to these students.

This 2-day course will provide a hands-on approach to teach the latest techniques and tools available to perform metabolite identification. We will apply these tools on the Q Exactive and LTQ Orbitrap mass spectrometry family. The course is targeted towards students and researchers who are actively applying metabolomics.

The course will be led by experts in the field and include significant hands-on experience using both the Q Exactive and LTQ Orbitrap instruments to perform:

- Data dependent acquisition
- Data independent acquisition
- MS/MS and MSⁿ data acquisition

The course will finish with a session on the tips and tricks from the experts and an opportunity to ask questions.

For further information and registration details, please visit <http://www.birmingham.ac.uk/facilities/metabolomics-training-centre/courses/metabolite-identification.aspx> or contact bmtc@contacts.bham.ac.uk

If you know of any metabolomics lectures, meetings, workshops, or training sessions that we should feature in future issues of this newsletter, please email Ian Forsythe (metabolomics.innovation@gmail.com).

Metabolomics Jobs & Collaborations

If you have a job you would like posted, please email Ian Forsythe (metabolomics.innovation@gmail.com). Job postings will be carried for a maximum of four issues (eight weeks) unless the position is filled prior to that date.

Jobs Offered

Job Title	Employer	Location	Posted	Closes	Source
Postdoctoral Researcher in High-Throughput Metabolomics	Karolinska Institute International Open Laboratory	Maebashi, Japan	18-May-18	Until filled	Gunma University
Various Positions					Metabolomics Society Jobs
Sample Preparation & NMR Metabolomics Specialist Technician	University of Birmingham	Birmingham, UK	24-May-18	24-Jun-18	Metabolomics Society Jobs
Postdoc in Developing High-throughput Metabolomics Methods for Population-based Phenotyping	Karolinska Institute International Open Laboratory	Maebashi, Japan	18-May-18	31-Jun-18	Metabolomics Society Jobs
Postdoctoral Researcher Position	UCSF	San Francisco, USA	01-Mar-18	Until filled	Metabolomics Society Jobs
Senior Scientific Officer (Lipidomics/ Metabolomics)	Nanyang Technological University	Singapore	12-Feb-18	Until filled	Metabolomics Society Jobs
Postdoc Position in Cheminformatics and Computational Metabolomics	Friedrich-Schiller-University	Jena, Germany	09-Feb-18		Friedrich-Schiller-University
Tenure Track Faculty Position in Food and Nutritional Metabolomics	The Ohio State University	Columbus, USA	02-Feb-18	02-Aug-18	Metabolomics Society Jobs
Ph.D. Position on Mass Spectrometry-Based Analysis of Metabolites	University of Basel	Basel, Switzerland	31-Jan-18	Until filled	Metabolomics Society Jobs
Various Positions			06-Jun		Metabolomics Association of North America
Postdoctoral Fellow in Metabolomics and Exposomics	Icahn School of Medicine at Mount Sinai	New York, USA	26-Jan-18	Until filled	Metabolomics Society Jobs

Metabolomics Jobs |

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 Ian Forsythe (metabolomics.innovation@gmail.com). Upon review, a limited number of job submissions will be selected for publication in the Jobs Wanted section.

- *There are currently no listings*
-