

Career Night Roundtable Discussion Leaders

Networking & Collaborations

Fabien Jourdan

INRAE-MetaboHUB, France



Fabien Jourdan holds a PhD in computer science from the University of Montpellier. He is INRAE research director (DR) in the research laboratory TOXALIM, Toulouse (France). He is co-leading a team of 30 scientists (Team MeX “Metabolism and Xenobiotics”) working on the metabolic impact of food contaminants on Human health. His main expertise is the development of computational solutions to model metabolism at the cellular or tissue level. Since 2009, he has coordinated the development of the MetExplore web server which is used by more than 1500 users worldwide to study omics data in the context of metabolic networks. Since 2021, he is director of French national infrastructure for Metabolomics and Fluxomics MetaboHUB. Former president of French-Speaking Metabolomics and Fluxomics Network (RFMF) he served as international Metabolomics Society secretary from 2020 to 2024.

Mariana S. Larraz Ferreira

UNIRIO - Federal University of the state of Rio de Janeiro, Brazil



Mariana Ferreira earned her degree in Food Engineering from the University of São Paulo (USP), Brazil, and completed her Ph.D. in Chemistry, Biochemistry, and Food Technology at the Institute Agro Montpellier, France (2011). Since 2013, she has been Professor at the Federal University of the State of Rio de Janeiro (UNIRIO) in the Department of Science and currently Director of the Center of Innovation in Mass Spectrometry (IMasS) at the same university. She is Scientist Fellow at FAPERJ (Foundation for Research Support of State of Rio de Janeiro) and at CNPq (National Council for Scientific and Technological Development).

Dr. Larraz is a dedicated researcher who has been a collaborator of the Center for Innovation in Mass Spectrometry since its inauguration in 2013. Her work focuses on the application of advanced mass spectrometry techniques to investigate the metabolomics and proteomics of food systems. She has a particular research emphasis on cereal metabolomics, aiming to unravel the complex biochemical profiles of grains. Her research is highly collaborative, featuring extensive work with diverse national and international partners, notably including INRAE in France, University of Granada (Spain) and the Metabolomics Core Facility (MetCore) at the Universidad de los Andes in Colombia."

Translating Research into Industry Applications

Bart Ghesquière **KU Leuven, Belgium**



Bart Ghesquière is a Full Professor at KU Leuven and Head of the Laboratory of Applied Mass Spectrometry (LAMaS), where he explores how cutting-edge technology can unravel the complexity of biology. He also leads the VIB Metabolomics Core Leuven and the KU Leuven Proteomics Core, positioning him at the interface of technology development and biomedical research.

Bart's career started in proteomics during his PhD at Ghent University, after which he moved to the National Institutes of Health (NIH) for postdoctoral work on oxidative stress triggers during cardiac arrest. He later joined the lab of Peter Carmeliet, where he shifted focus toward metabolomics—particularly tracer metabolomics, a powerful approach to track how nutrients are processed in living systems.

Today, his research revolves around developing and applying advanced mass spectrometry technologies to study metabolism at unprecedented resolution—from whole tissues down to single cells and even subcellular compartments. His group integrates metabolomics, proteomics, and lipidomics into unified workflows, enabling a deeper understanding of how metabolic processes drive health and disease.

Beyond research, Bart is passionate about building scientific infrastructure and communities. He has secured multiple large-scale funding grants to establish state-of-the-art mass spectrometry platforms and is actively involved in training the next generation of scientists through courses and international workshops.

At heart, Bart is a “translational technologist”: someone who doesn't just use technology, but builds it, scales it, and puts it in the hands of researchers to accelerate discovery.

Bashar Amer **Thermo Fisher Scientific, United States**



Bashar Amer is a metabolomics scientist at Thermo Fisher Scientific, working at the intersection of science and collaboration. In his role, he partners with researchers and cross-functional teams to develop and communicate LC-MS and GC-MS–based metabolomics workflows.

With a background in microbial and nutritional metabolomics, he has contributed to assay development and, more recently, to innovative solutions like SQUAD, a workflow that combines targeted and untargeted analysis in a single experiment.

Bashar is particularly interested in how strong networks and collaborations, across academia and industry, can accelerate innovation and create new opportunities.

Responsible Use of AI and LLMs

Ricardo Roberto da Silva

University of São Paulo, Brazil



Dr. da Silva holds a PhD in Bioinformatics with a focus on computational metabolomics. During the postdoctoral period, he worked on the development of databases, multivariate statistics for omics data, and the application and development of quantitative methods for multidimensional data integration. He currently conducts research in the field of data science, aiming to integrate diverse data sources and utilize computational statistics to elucidate altered metabolic pathways under various sampling conditions in different organisms, especially microorganisms. He is currently an assistant professor at the University of São Paulo, where he coordinates the Computational Chemical Biology Laboratory (CCBL) - <http://ccbl.fcrp.usp.br/ccbl/>).

Fidele Tugizimana

University of Johannesburg & Omnia Group, Ltd., South Africa



Fidele Tugizimana is a biochemist and internationally recognized leader in metabolomics, advancing innovation at the interface of systems biology, artificial intelligence (AI), and translational science. He holds a PhD (dumma cum laude, 2017) and Msc (cum laude) in Biochemistry from the University of Johannesburg, as well as a Bphil in Philosophy (Urbaniana University, Rome, Italy), reflecting a multidisciplinary foundation that shapes his scientific thinking. His training includes metabolomics in life sciences (EMBO, Cambridge, UK) and metabolic modelling and flux analyses (Wageningen University & Research, Netherlands). He is currently pursuing a MBA in Digital Transformation, reflecting his commitment and vision to translating scientific innovation into impact. Fidele serves as a Lecturer and Research Scientist at the University of Johannesburg, Director of the Research Centre for Plant Metabolomics (RCPM), Specialist Scientist at Omnia Group Ltd, and Visiting Professor (VP) at the University of Messina, Italy. He is a co-founding member and current President of Metabolomics South Africa (MSA) and has served on the Board of Directors of the International Metabolomics Society, where he continues to contribute through various strategic and scientific committees. He leads the Tugizimana Lab (TTL) (<https://thetugizimanalab.co.za/>), a dynamic and diverse research group of over 30 postgraduates (MSc and PhD candidates) and postdoctoral research fellows, with both pan-African and international collaborations. Through dedicated mentorship and capacity development, he fosters the next generation of scientists while driving cutting-edge research in computational metabolomics, artificial intelligence (AI), and multi-omics integration. His work focuses on decoding complex biochemical systems and translating these insights into applications in sustainable agriculture, biostimulant development, natural products, and health innovation. His contributions reflect scientific leadership, a strong commitment to mentorship and human capital development, and a transformative vision for metabolomics-driven innovation in Africa and globally.

Grant Writing

Lynn Vanhaecke
Ghent University, Belgium



Lynn Vanhaecke holds a PhD in Bioscience Engineering (2008), is Full Professor and head of the Lab of Integrative Metabolomics at Ghent University (Belgium) since 2011 and holds a 20% appointment at the Institute of Global Food Security at Queen's University Belfast (UK) since 2018. Lynn's major research objectives include the holistic analyses of small molecules through metabolomics and lipidomics using high-resolution mass spectrometry (including ambient ionization) in relation to the diet-microbiome-health axis. In 2023, she received an ERC Consolidator Grant to continue her work on advancing metabolomics into pediatric precision medicine. She is also involved in many collaborative efforts including the first Flemish Exposome project called FLEXiGUT and has more than 250 publications (H-index 55). Lynn

is inventor on a couple of patents and holds a licensing agreement for some of the novel metabolic and lipidomic fingerprinting and metabotyping methods she developed. She is an active board member of the Nutritional genomics society and an elected board member of the Metabolomics Society.

Elizabeth Want
Imperial College London, United Kingdom



Dr Elizabeth Want is an Associate Professor (Reader) in Clinical Mass Spectrometry, and Head of the Section of Bioanalytical Chemistry in the Department of Metabolism, Digestion and Reproduction at Imperial College London. She is also Director of the Imperial International Phenome Training Centre, which runs several hands-on courses every year.

Elizabeth has >25 yrs of experience in mass spectrometry and chromatographic techniques. Her research focuses on the development, optimisation and application of novel LC-MS methodologies for metabolomics. She aims to improve molecular assays for clinical studies, leading to deeper understanding of diseases, improved healthcare and better patient outcomes. She has applied these assays in biomedical areas including glioblastoma, traumatic brain injury, liver disease and burn injury.

Career Transitions

Silvia Radenkovic

UMC Utrecht, The Netherlands



Silvia earned her PhD at KU Leuven Faculty of Medicine at the Metabolomics Expertise Center (MEC), CCB-VIB and Mayo Clinic (visiting) under the supervision of prof.dr. Bart Ghesquiere, PhD. and prof.dr. Eva Morava, MD, PhD in the field of inborn errors of metabolism (IEMs). During her PhD (KU Leuven, Belgium; Mayo Clinic, USA) and postdoctoral projects (Mayo Clinic, USA) Silvia has focused on the application of omics technologies (tracer metabolomics, untargeted metabolomics, proteomics, glycoproteomics) and models (iPSC, organoids, cardiomyocytes) to uncover novel biomarkers, treatments and tissue-specific pathomechanisms of IEMs. In addition to honing her skills in metabolomics, (glyco)proteomics and disease modelling, she has also worked closely with the clinicians and with patients and their families. These interactions further strengthened her motivation to contribute directly to patient care.

In March 2024, Silvia started her laboratory clinical biochemical genetics training at Metabolic diagnostics section, Department of Genetics, UMC Utrecht. In her current role, she is a part of an interdisciplinary metabolic medicine team and is actively involved in the diagnostic evaluation and interpretation of metabolic investigations, and treatment management of patients with IEMs, which rely heavily on targeted and untargeted metabolomics analysis.

Apart from improving patient care, Silvia is passionate about research outreach, mentoring and education. She is currently the ex-officio chair of Early-career members network (EMN) of the Metabolomics Society. She is also a part of the Females in Mass Spectrometry awards committee and is the early career representative of the Biochemical Society grant committee. As part of her interest in research outreach, Silvia hosts the “research round-up” podcast for the Journal of Inherited Metabolic Disorders.

Sarah Haynes

Enveda, Unites States



Sarah did her PhD in Chemistry at the University of Michigan, where she developed LC-IMS-MS methods for proteomics. She completed a postdoc in computational proteomics with Alexey Nesvizhskii before joining Enveda in 2022. On the Product team at Enveda, she gets to spend time at the intersection of mass spectrometry, chemistry, machine learning, and data science. She loves prototyping, cross-functional teamwork, and learning from her fabulous colleagues! She is based in Ann Arbor, Michigan, and enjoys spending time outside with her two small children.

International Employment Opportunities

Maria Eugenia Monge

CIBION-CONICET, Argentina



Dr. María Eugenia Monge is an Independent Researcher of CONICET, the National Scientific and Technical Research Council of Argentina. In 2006, she obtained her Ph.D. in chemistry from the University of Buenos Aires. Between 2007 and 2014, she held postdoctoral positions in Italy, France, and the USA. In 2014, she was recruited by CONICET to set-up a new laboratory in a new research center (CIBION), to start a research group in a scientific area that was new in Argentina and have succeeded as the founder of the first mass spectrometry-based metabolomics laboratory in Argentina with applications in human health. Since 2014, she has been leading the Bioanalytical Mass Spectrometry Group and the Mass Spectrometry facility of CIBION. Her research group develops MS-based analytical methods using untargeted

metabolomics and lipidomics approaches with applications in health. One of the goals of Dr. Monge's group is to develop alternative analytical strategies to improve the performance of existing diagnosis and prognosis methods that are currently implemented in the clinics and to understand altered pathways in disease progression. She leads projects focused on the study of genitourinary tumors and pulmonary fibrosis. As well, her team is involved in collaborative studies to investigate dengue and chikungunya treatment and progression with a combined pharmacometabolomics and biomarker discovery approach. Her group has also developed the first LC-MS/MS-based targeted assay in Argentina that was translated to a public hospital for monitoring pediatric patients. Her team also applies untargeted metabolomics workflows to address health-related scientific questions in the field of molecular neurobiology using in vitro and in vivo models. These projects are feasible based on strong collaborations with national health centers and biobanking systems. In addition, her group develops open tools for preprocessing LC-MS data for quality control procedures in untargeted metabolomics workflows. Recently, her group started developing untargeted workflows for evaluating food authenticity.

Dr. Monge has coordinated hands-on metabolomics courses for South American students and has participated in promoting awareness of metabolomics with the hope of strengthening the Latin American community. She has taught courses in Argentina, Brazil, Mexico, and Colombia. She is a founding member of the Latin American Metabolic Profiling Society (LAMPS). Since 2019, she has been a member of the Metabolomics Quality Assurance and Quality Control Consortium (mQACC) and a member of the Metabolomics Society. In 2022 she was awarded "The Metabolomics Society Medal" as a recognition of excellence in the career from the Board of Directors of the Metabolomics Society, and the "Females in Mass Spectrometry Empowerment Award" as a recognition of dedication to mass spectrometry research and applications. Since October 2022, she has served on the Board of Directors of the Metabolomics Society, and since October 2024 she has been the Secretary of the Society. Since 2025, she is an Executive Editor of Metabolomics.

James MacRae

The Francis Crick Institute, UK



James MacRae has been working with small molecule mass spectrometry for over 25 years. Since 2013, James has been Head of Metabolomics at The Francis Crick Institute in London. His laboratory is focused on developing new tools for metabolomics and lipidomics, as well as data processing and analysis. The work of James and his lab has led to over 100 peer-reviewed publications across a number of disciplines - from intricate stable isotope labelling and pathway delineation studies, to broad metabolite and lipid profiling, including large-scale clinical cohort studies. Before this, James completed a PhD on structural glycobiology at the University of Dundee, before moving to the University of Melbourne in 2006. Here, he developed novel metabolomics techniques – including stable isotope labelling – for the study of the

metabolism of apicomplexan parasites, including *Toxoplasma gondii* and the malaria parasite, *Plasmodium falciparum*.

Navigating the Post-doc Grey Zone

Louis-Félix Nothias

Centre National de la Recherche Scientifique & Université Côte d'Azur, France



Dr. Louis-Félix Nothias is a CNRS Junior Professor and Interdisciplinary Institute for Artificial Intelligence (3iA) Côte d'Azur affiliated chair at Université Côte d'Azur in Nice, France. In 2023, he founded the HolobiomicsLab at the Institut de Chimie de Nice (<https://holobiomicslab.cnrs.fr>), which develops approaches combining advanced mass spectrometry-based metabolomics with artificial intelligence.

Julia Kuligowski

Health Research Institute La Fe, Spain



Dr. Kuligowski holds a PhD in Chemistry and a degree in Biotechnology, with international academic experience across Austria, Spain, the UK, and the Netherlands. Her career development was strongly shaped by a series of competitive postdoctoral fellowships at the Neonatal Research Group of the Health Research Institute La Fe (Valencia), where she established an independent research line focused on molecular biomarkers in newborn biofluids, particularly for hypoxic-ischemic encephalopathy and persistent pulmonary hypertension. During this period, she also developed untargeted metabolomics workflows tailored to neonatal studies and validated oxidative and nitrosative stress biomarkers in preterm infants, laying the foundation for her transition to independent research.

Her work has since expanded to personalized nutrition, human milk composition, extracellular vesicles, and the development of portable sensors and point-of-care testing, leading to multiple patents and extensive collaboration with clinical and technology partners. As Principal Investigator, she has secured over €2.7 million in funding and authored more than 150 peer-reviewed publications, alongside supervising PhD students and postdoctoral researchers. She currently leads projects including participation in the MSCA Doctoral Network PROTEMIC and remains actively engaged in international scientific networks, peer review, and science communication. She also serves on the Board of Directors of the Metabolomics Society (since October 2025) and has been appointed to the editorial board of Metabolomics (Springer).

Career Resilience: handling rejection, failure & the imposter syndrome

Dr Nicholas Rattray

University of Strathclyde, UK



Dr Nicholas (Nik) Rattray is Professor of Clinical Metabolism at the Strathclyde Institute of Pharmacy and Biomolecular Sciences, University of Strathclyde. His research focuses on understanding how metabolic pathways governing biochemical and mitochondrial energy production change across the human life course, from early development and pregnancy through ageing, frailty, and chronic disease.

His work aims to define the biomolecular basis of ageing and resilience, with a particular emphasis on identifying clinically actionable biomarkers of frailty and disease risk. Professor Rattray leads an internationally recognised research programme that integrates population-scale human studies, mechanistic cellular models, and advanced mass spectrometry-based metabolomics and proteomics. His clinical portfolio spans more than

20 trials and includes research on population-level frailty metabolism, early diagnostic and theranostic biomarker development, placental energy metabolism, and the biological and metabolic basis of cancer.

A core feature of his research is the integration of multi-omics data with clinical, environmental, and socioeconomic information, including large-scale biobank resources. Through statistical modelling and AI-driven approaches, his group develops methods to link metabolite profiles to biochemical pathways, genomic regulation, and epidemiological exposures. He likes mountains, cats and guitars but not necessarily in that order!

Aurelia Williams

North-West University, South Africa



Dr. Aurelia A. Williams is an Associate Professor of Biochemistry at the North-West University (NWU), South Africa, and a researcher in the Biomedical and Molecular Metabolism Research Group (BioMMet). Her work focuses on uncovering small-molecule mechanisms underlying infectious and acquired diseases and developing innovative, translational strategies to improve health outcomes.

Williams has acquired technical skills through extensive training, applying techniques such as flow cytometry, cell culture, ELISA, immunohistochemistry, and Western blotting, alongside expertise in metabolomics workflows and data interpretation.

She is a former fellow of the Future Professors Programme Phase II Cohort I (2021–2023), an initiative funded by the Department of Higher Education and Training (DHET). Prof Williams has been recognized through other prestigious awards, including the Mail & Guardian Top 200 Young South Africans (2019), is in receipt of the NRF's Knowledge Interchange and Collaboration Grant (2025), and received multiple research, travel, and capacity development grants, reflecting sustained academic impact and leadership.

Williams currently serves on the Board of Directors of the International Metabolomics Society. A prominent leader in South Africa's scientific community, she is also the Deputy President and co-founder of Metabolomics South Africa (MSA), an organisation dedicated to promoting metabolomics research and collaboration. Williams and the MSA team proudly hosted the 1st African Metabolomics Conference during March 2026 - the first Metabolomics conference on the continent.

As an educator, Prof. Williams adopts a learner-centered teaching philosophy, integrating open educational resources and innovative technologies to enhance student engagement and critical thinking. She contributes actively to curriculum development and academic leadership.

Committed to mentorship, equity, and community impact, Dr. Williams supports the next generation of scientists through student supervision, outreach initiatives, and advocacy for women in science. Dr. Williams contributes to ethical health research through her service on Aurum's Community Advisory Board, ensuring that research reflects community values.

Diversity, Equity and Inclusion

Rick Dunn

University of Liverpool, UK



Rick is Professor of Analytical and Clinical Metabolomics at the University of Liverpool. He has spent the last 25 years working in metabolomics from being a technician in Sheffield to his current role in Liverpool. He has a passion for developing chromatography-mass spectrometry untargeted/targeted assays for collection of high-quality data and in developing new tools (software) and resources (MS/MS and retention time libraries) for metabolite annotation/identification. He applies these to study health and disease in humans and other mammals. He is passionate about training the next generation of scientists. He is President of the Metabolomics Society and is Reviews Editor for the journal *Metabolomics*. He was awarded a Honorary Fellowship by the Metabolomics Society in 2020 for his commitment to the society and metabolite annotation.

Anne Bendt

National University of Singapore, Singapore



Anne K Bendt is Principal Investigator at SLING, the Singapore Lipidomics Incubator, an internationally renowned R&D program in lipid research and technology development, anchored at the National University of Singapore. She focuses on the clinical translation of mass spectrometry-based technologies into 'real life' applications, primarily for lipids and small molecules. Realizing the importance of strict quality control, particularly for clinical applications, Anne recently spearheaded the implementation of mass spec-based workflows for a steroid panel compliant with ISO15189, the international standard for medical diagnostics. Anne is further passionate about training and education and has made substantial contributions to SLING's various workshops and 'ic lipid' training courses. Internationally, Anne is a co-instructor of 'Lipidomics 101', a short course for clinical lipidomics. With clinical translation close to her heart, Anne serves on the 'Metabolomics' working group within the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC). She further serves on the steering committee of 'Clinical Lipidomics' within the International Lipidomics Society (ILS) and as Associate Editor for 'Journal of Mass Spectrometry and Advances in the Clinical Lab' (JMSACL). In 2025, Anne was elected to the Board of Directors of the Metabolomics Society. Early 2019 Anne co-founded the global initiative 'Females in Mass Spectrometry' (FeMS), serving as Chair on the Board.

Science Communication

Roy Goodacre

University of Liverpool, UK



Trained as a microbiologist and analytical chemist, Roy's research develops metabolomics and spectroscopy to address interesting biological questions. He has helped establish mass spectrometry-based metabolomics for long-term studies and is employing these methods for clinical/health and plant studies, as well as for understanding microbial systems. He has developed a variety of different Raman spectroscopy approaches for bioanalysis with a particular focus on metabolite quantification and image analysis of single cells.

Roy helped establish the Metabolomics Society and is Editor-in-Chief of the journal *Metabolomics*.

Alice Limonciel

Bruker, Austria



Dr. Alice Limonciel holds a PhD in molecular biology from the Medical University of Innsbruck and completed postdoctoral research in multiomics toxicology in Austria and the Netherlands. At biocrates life sciences, Alice used scientific communication to engage the scientific community on the role of metabolomics in modern medicine—from personalized care to population health. At Bruker, Alice works to accelerate the impact of metabolomics through strategic initiatives. Driven by a passion for community engagement, she developed The STORY principle - a practical framework for making sense of metabolomics data. She also hosts The Metabolomist podcast, where she connects metabolomics scientists through their stories.