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GloMiNe-Peru

## Global Microbiome Network - First Latin American Symposium

January 15-17, 2021

### Agenda

REGISTER HERE: <https://bit.ly/3h9erio>

DAY 1 - Jan 15, 2021 (09:00-12:30 GMT -5)

**Moderators:** BETH NASH • MARCELO MEREGALLI-FERRER

#### Welcome Words

- 09:00-09:15 **JORGE MARCONE** and **MARÍA GLORIA DOMÍNGUEZ-BELLO** (Rutgers)  
09:15-09:40 **LUISA ELENA GUINAND-QUINTERO** (Viceministra de Desarrollo Estratégico de los Recursos Naturales, Ministerio del Ambiente): *Biodiversity value in Peruvian policies*

#### Session 1: The Human Microbiome

- 09:45-10:00 **ROBERT GOODMAN** (Rutgers): *Global Microbiome Network: roles of universities*  
10:00-10:15 **MARTIN BLASER** (Rutgers): *Microbiome and health*  
10:15-10:30 BREAK  
10:30-10:45 **LIPING ZHAO** (Rutgers): *Guild-based data mining for understanding the gut microbiome in human health and diseases*  
10:45-11:00 **PASCALE VONAESCH** (Swiss TPH): *The human microbiota in chronic undernutrition*  
11:00-11:15 **PABLO TSUKAYAMA** (UPCH): *Microbiome research in Peru*  
11:15-11:30 BREAK  
11:30-11:45 **MANUEL RUIZ-MULLER** (Sociedad Peruana de Derecho Ambiental): *The role and impact of international and national policy on microbiome R&D: current trends*  
11:45-12:00 **TORRE MIDTVEDT** (Karolinska Institutet): *Why we need to preserve the microbiota*  
12:00-12:30 GENERAL DISCUSSION

DAY 2 - Jan 16, 2021 (09:00-12:30 GMT -5)

#### Session 2: Culture, Ecology and Ethics

- 09:00-09:15 **JORGE MARCONE** (Rutgers): *Traditional narratives, food and ecology*  
09:15-09:30 **CHIARA BARBIERI** (University of Zurich): *Bioanthropological research and community participation in South America*



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- 09:30-09:45 **OSCAR NOYA-ALARCÓN** (Universidad Central de Venezuela): *Working on the health of remote Amazon communities*
- 09:45-10:00 **MARÍA GLORIA DOMÍNGUEZ-BELLO** (Rutgers): *Microbiomes and traditional lifestyles*
- 10:00-10:15 **DAN KNIGHTS** (University of Minnesota): *Immigration and microbiome. Considerations for restoration*
- 10:15-10:30 **ROBERTO ZARIQUIEY-BIONDI** (PUCP): *The linguistic mosaic in the Amazonia*
- 10:30-10:45 BREAK
- 10:45-11:00 **DEBORAH DELGADO-PUGLEY** (PUCP): *Indigenous peoples of Peru. Protection and research*
- 11:00-11:15 **GABRIELA SALMON-MULANOVICH** (PUCP): *Regulation of human research in Peru*
- 11:15-11:30 **LUIS FELIPE TORRES-ESPINOZA** (Federal University of Rio de Janeiro): *Cultural pertinence of research on indigenous communities*
- 11:30-12:00 GENERAL DISCUSSION

DAY 3 - Jan 17, 2021 (09:00-12:30 GMT -5)

### Session 3: Methods of Collection, Preservation and Research

- 09:00-09:15 **MARÍA GLORIA DOMÍNGUEZ-BELLO** (Rutgers): *The Microbiota Vault History*
- 09:15-09:30 **MATTHEW J. RYAN** (CABI, U.K.): *Collections: adapting to meet the needs of microbiome research*
- 09:30-09:45 **THOMAS SCHMIDT** (Michigan Microbiome Project): *Engineering the gut microbiome of a clinical cohort*
- 09:45-10:00 **GREGORIO IRAOLA-BENTANCOR** (Institut Pasteur): *The Latinbiota Consortium: understanding the gut microbiome composition and variability in LatAm populations*
- 10:00-10:15 **JOËL DORÉ** (French National Research Institute for Agriculture, Food and the Environment): *Metagenomics*
- 10:15-10:30 BREAK
- 10:30-10:45 **ADRIAN EGLI** (University Hospital Basel): *Quality and standardization to pave the way into routine application of clinical metagenomics*
- 10:45-11:00 **NICHOLAS BOKULICH** (ETH Zürich): *Bioinformatics platforms for reproducible microbiome research*
- 11:00-11:15 **ROB KNIGHT** (University of California San Diego): *Microbiota analyses*
- 11:15-11:30 **JACK GILBERT** (University of California San Diego): *Advancing microbiome research towards translation*
- 11:30-11:45 **LEE KERKHOF** (Rutgers): *Sequencing outside the lab: the power of MinION*
- 11:45-12:00 **MANUEL FANKHAUSER** (Seerave Foundation): *Role of foundations in the MV Initiative*
- 12:00-12:30 GENERAL DISCUSSION

### Organizing Committee

DEBORAH DELGADO-PUGLEY • GABRIELA SALMON-MULANOVICH • PABLO TSUKAYAMA • LUIS FELIPE TORRES-ESPINOZA • JORGE MARCONE • MARÍA GLORIA DOMÍNGUEZ-BELLO • BETH NASH • MARCELO MEREGALLI-FERRER



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## Speakers BIOs

**Chiara Barbieri** is a researcher and leader of the group “Human Genetic Diversity across Languages and Cultures” at the University of Zurich. Her research uses genetic analysis to reconstruct demographic events such as migration, diffusion and contact, drawing parallels between genetics and other anthropological disciplines, especially linguistics. She is specialized in the study of (pre)history and current human diversity of South America.



**Martin Blaser** holds the Henry Rutgers Chair of the Human Microbiome and Professor of Medicine and Microbiology at the Robert Wood Johnson Medical School as well as Director of the Center for Advanced Biotechnology and Medicine at Rutgers University. A physician and microbiologist, his research has centered on the relationship of humans and bacteria, both as foes and friends. His award-winning book for general audiences about our changing microbiota, *Missing Microbes*, has been translated into 20 languages.



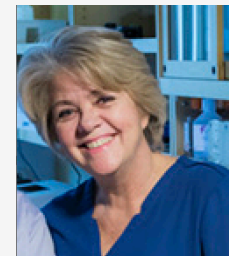
**Nicholas Bokulich** is an Assistant Professor of Food Systems Biotechnology in the Department of Health Sciences and Technology at ETH Zürich. Before joining ETHZ, he completed postdoctoral training at New York University Medical Center and Northern Arizona University, and received his PhD at the University of California, Davis. He is a lead developer of the QIIME 2 multiomics analysis software platform (<http://qiime2.org/>) and other bioinformatics methods for microbiome and omics analysis. His laboratory studies the interconnection between microbial ecosystems, food, and human health and development



**Deborah Delgado-Pugley** is a Professor of Sociology at the Pontificia Universidad Católica del Perú. She has a Ph.D. in International Development (Catholic University of Louvain) and Sociology (EHESS Paris School of Social Sciences Studies). She has researched on environmental and climate policies at the international and territorial level. She has field experience in the Amazon regions of Bolivia and Peru, where she has led research teams on climate change, indigenous movements, human rights, natural resource management, forestry development, and gender.



**María Gloria Domínguez-Bello** is the Henry Rutgers Professor of Microbiome and Health at Rutgers University, and is the Director of the New Jersey Institute for Food Nutrition and Health (IFNH). Her lab focuses on multidisciplinary approaches to study impacts of modern practices on the microbiome and strategies for restoration. She is a fellow of the American Academy of Microbiology, and of the Infectious Disease Society of America.





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**Joël Doré** is a Research Director at the French National Research Institute for Agriculture, Food and the Environment, INRAE, and President of the Executive Committee of the Pre-Industrial Demonstrator MetaGenoPolis, a platform of excellence dedicated to quantitative and functional metagenomics, and the Deputy Head of the MICALIS institute "Food and Gut Microbiology for Human Health" and scientific board member of Microbiology Pole of the Doctoral School "Therapeutic Innovations" at Paris-XI University. He received his Ph.D. from the University of Illinois at Urbana-Champaign, USA.



**Adrian Egli** leads the Applied Microbiology Research group at University Hospital Basel in Switzerland, to translate our understanding of the complex host-pathogen interactions into clinical applications, such as novel adjuvant development targeting specific signaling pathways or preventive measurements on a population level.



**Manuel Fankhauser** is Manuel Fankhauser is Chief Scientific Officer at Seerave Foundation, an independent family foundation that aspires to broaden and enhance the Standard of Care for cancer patients, with the underlying conviction that more benign approaches can be developed to treat cancers and other illnesses by modulating the nutrition / microbiome / metabolite / immune system axis. Dr. Fankhauser holds a PhD in bioengineering from the Swiss Federal Institute of Technology in Lausanne (EPFL), where he worked on understanding the role of lymphatics in shaping anti-tumor immune responses.



**Jack A. Gilbert** is a Professor in Pediatrics and the Scripps Institution of Oceanography at University of California San Diego. Dr. Gilbert uses molecular analysis to test fundamental hypotheses in microbial ecology. He cofounded the Earth Microbiome Project and American Gut Project. He has authored more than 300 peer reviewed publications and book chapters on microbial ecology. He is also the founding Editor in Chief of mSystems journal.



**Robert Goodman** is a plant biologist and virologist who served as Executive Dean of Agriculture and Natural Resources at Rutgers University, executive dean of the School of Environmental and Biological Sciences, executive director of the New Jersey Agricultural Experiment Station, and Distinguished Professor of Ecology, Evolution, and Natural Resources until 2020, when he was named a University Professor by the Rutgers Board of Governors and Executive Dean Emeritus. He is a Fellow of the American Academy of Microbiology and the American Association for the Advancement of Science.





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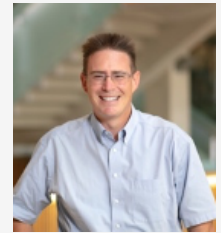
**Gregorio M. Iraola-Bentancor** is a computational microbiologist. He obtained a PhD in Biology focused on microbial genomics at the *Universidad de la República* and the Institut Pasteur Montevideo. He is currently the Head of the Microbial Genomics Lab at the Institut Pasteur Montevideo and has shared appointments at the Wellcome Sanger Institute (UK) and the *Universidad Mayor* of Santiago de Chile (Chile). He is part of the MetaSUB International Consortium and leads the Latinbiota Consortium, a continental effort to understand composition and variability of gut microbiome in Latin America.



**Lee Kerkhof** is a marine microbiologist who began working with nucleic acids nearly 40 years ago. His research is focused on detecting active microorganisms (prokaryotic, archaeal, and eukaryotic) in aeolian, aquatic, sediments/soils systems, and in association with eukaryotic hosts. His recent efforts include ribosomal RNA operon profiling of complex samples and detecting microbes incorporating  $^{13}\text{C}$  and  $^{15}\text{N}$  into their genomes.



**Rob Knight** is the Director of the Center for Microbiome Innovation at University of California San Diego, where he is a Professor of Pediatrics, Bioengineering, and Computer Science & Engineering. He has spoken at TED and written over 700 scientific articles. He was honored with the 2017 Massry Prize, often considered a predictor of the Nobel. His work combines microbiology, DNA sequencing, ecology and computer science to understand the vast numbers of microbes that inhabit our bodies and our planet.



**Dan Knights** is an Associate Professor in the Department of Computer Science and Engineering and the BioTechnology Institute at the University of Minnesota. He obtained his Ph.D. in Computer Science under Rob Knight and Mike Mozer at the University of Colorado at Boulder, with a certificate in Interdisciplinary Quantitative Biology from the University of Colorado's BioFrontiers Institute. He came to the University of Minnesota from a post-doctoral fellowship in the lab of Ramnik Xavier at Harvard Medical School and the Broad Institute of MIT and Harvard.



**Jorge Marcone** is an Associate Professor in the Department of Spanish and Portuguese, and the Program in Comparative Literature at Rutgers University. His research focuses on narratives where identity and well-being are understood within multispecies communities, or in networks of entangled human and nonhumans. He collaborates in activism towards cultural preservation of traditional food production systems, and he is interested in indigenous and local environmental movements.







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**Tore Midtvedt** was a Professor in Medical Microbiology, University of Oslo, Norway and Professor and Chairman in the Department of Medical Microbial Ecology, Cell and Molecular Biology in Karolinska Institute, Stockholm, now Professor Emeritus in Karolinska Institute since 1990.



**Oscar Noya-Alarcón** has a MSc in Parasitology and is a medical doctor and private pilot. Since 2009, his work has focused on research and medical assistance pertaining to Chagas disease, hydatidosis, malaria, trachoma, tungiasis, ecoepidemiology and the microbiome for isolated indigenous populations of the Venezuelan Amazon. He has coordinated the Program for the Elimination of Onchocerciasis in Venezuela as a doctor, researcher and air coordinator at the Amazon Center for Research and Control of Tropical Diseases (CAICET) and at the Institute of Tropical Medicine in Venezuela.



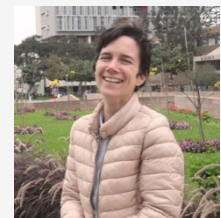
**Manuel Ruiz-Muller** is an attorney who has worked on a variety of issues related to the environment and sustainable development. In the last decade, he has focused on biotechnology, "digital genetic sequences", protection of ancestral knowledge, agrobiodiversity, food security, rural peoples and communities, and climate change. He has supported political and regulatory processes in the Andean Community, the Amazonian Parliament, ACTO, UNASUR, CCAD, as well as in different countries in Latin America and the Caribbean. He has been a consultant for GIZ, IDB, FAO, CAN, CAF, ACTO, GCIAR, UNEP, World Bank, among others. He has also been a professor of International Environmental Law at the Pontificia Universidad Católica del Perú, and he has published extensively.



**Matthew J. Ryan** curates the CABI microbial culture collection and has led research into the development of novel microbial cryopreservation protocols. He plays an active role in various international activities to ensure that biobanking infrastructure is developing to meet the needs of the microbiome research community, especially in Agri-food. He leads a UK BBSRC project to establish a crop microbiome cryobank, is a collaborator on the EU MicrobiomeSupport project and is a board member of the International Alliance for Phytobiomes Research.



**Gabriela Salmon-Mulanovich** holds a B.S. in Biology and Biotechnology at the Universidad Nacional Agraria La Molina, Peru. She completed epidemiology studies at master's level at the Universidad Peruana Cayetano Heredia. She obtained her Ph.D. from the Department of International Health, Epidemiology and Global Disease Control, Johns Hopkins University Bloomberg School of Public Health. Her research has been focused on infectious diseases for evidence-based public policies.





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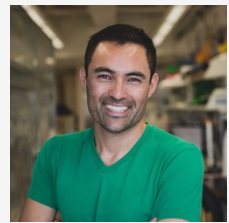
**Thomas Schmidt** is the Director of the Michigan Microbiome Project and a microbiologist who has studies microbes from diverse environments. Most recently he has focused on understanding how environmental characteristics in the GI tract influence the functioning of the gut microbiota and how to engineer that system for desired outcomes.



**Luis Felipe Torres-Espinoza** graduated in Anthropology from the Pontificia Universidad Católica del Perú, Magister in Latin American Studies from the University of Newcastle (U.K.) and a Ph.D. candidate in Social Anthropology from the National Museum of the Federal University of Rio de Janeiro (Brazil). Dedicated to research in the field of indigenous ethnology and public policies related to indigenous peoples in isolation and initial contact in the Amazon.



**Pablo Tsukayama** is Assistant Professor of Microbiology and Principal Investigator of the Microbial Genomics Laboratory at Universidad Peruana Cayetano Heredia in Lima. He did his Ph.D. at Washington University in St. Louis with Prof. Gautam Dantas studying the transmission dynamics of antibiotic resistance genes between human and environmental microbiomes in peri-urban communities in Lima.



**Pascale Vonaesch** is an Assistant Professor at the University of Basel. Her lab focuses on fundamental and translational/clinical research about the human intestinal ecosystem and the contribution of the microbiota to health and disease. In her research, she is especially interested in the role of the intestinal microbiome in childhood malnutrition and in the development of microbiota-targeted interventions. She has been the recipient of the prestigious Swiss National Science Foundation Professorial Fellowship and is a member of the Swiss Society of Microbiology.



**Liping Zhao** is the Eveleigh-Fenton Chair of Applied Microbiology at Rutgers University. He is a fellow of American Academy of Microbiology, a senior fellow of Canadian Institute for Advanced Research, and a member of the Scientific Advisory Board for the Center for Microbiome Research and Education of the American Gastroenterology Association. His pioneer research applies metagenomics-metabolomics integrated tools and dietary interventions for manipulating gut microbiota to improve human metabolic health. SCIENCE magazine (Science 336: 1248) featured his work on gut microbiota and obesity.





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## Speakers' Affiliation & Contact Info

NAME	EMAIL	AFFILIATION	COUNTRY
Barbieri, Chiara	<a href="mailto:barbieri.chiara@gmail.com">barbieri.chiara@gmail.com</a>	University of Zurich	Switzerland
Blaser, Martin	<a href="mailto:martin.blaser@cabm.rutgers.edu">martin.blaser@cabm.rutgers.edu</a>	Rutgers, the State University of New Jersey	USA
Bokulich, Nicholas	<a href="mailto:nicholas.bokulich@hest.ethz.ch">nicholas.bokulich@hest.ethz.ch</a>	ETH Zurich	Switzerland
Delgado-Pugley, Deborah	<a href="mailto:deborah.delgado@pucp.pe">deborah.delgado@pucp.pe</a>	Pontificia Universidad Católica del Perú	Perú
Domínguez-Bello, María G.	<a href="mailto:mg.dominquez-bello@rutgers.edu">mg.dominquez-bello@rutgers.edu</a>	Rutgers, the State University of New Jersey	USA
Doré, Joël	<a href="mailto:joel.dore@inrae.fr">joel.dore@inrae.fr</a>	INRAE	France
Egli, Adrian	<a href="mailto:ad.egli@unibas.ch">ad.egli@unibas.ch</a>	University Hospital Basel	Switzerland
Fankhauser, Manuel	<a href="mailto:manuel.fankhauser@seerave.org">manuel.fankhauser@seerave.org</a>	Seerave Foundation	Switzerland
Gilbert, Jack	<a href="mailto:gilbertjack@gmail.com">gilbertjack@gmail.com</a>	University of California San Diego	USA
Goodman, Robert	<a href="mailto:robert.goodman@rutgers.edu">robert.goodman@rutgers.edu</a>	Rutgers, the State University of New Jersey	USA
Iraola-Bentancor, Gregorio M.	<a href="mailto:giraola@pasteur.edu.uy">giraola@pasteur.edu.uy</a>	Institut Pasteur	Uruguay
Kerkhof, Lee	<a href="mailto:kerkhof@marine.rutgers.edu">kerkhof@marine.rutgers.edu</a>	Rutgers, the State University of New Jersey	USA
Knight, Rob	<a href="mailto:robknight@ucsd.edu">robknight@ucsd.edu</a>	University of California San Diego	USA
Knights, Dan	<a href="mailto:dknights@umn.edu">dknights@umn.edu</a>	University of Minnesota	USA
Marcone, Jorge	<a href="mailto:jmarcone@spanport.rutgers.edu">jmarcone@spanport.rutgers.edu</a>	Rutgers, the State University of New Jersey	USA
Midtvedt, Tore	<a href="mailto:tore.midtvedt@ki.se">tore.midtvedt@ki.se</a>	Karolinska Institute	Sweden
Noya-Alarcón, Oscar	<a href="mailto:ozonoya6@yahoo.com">ozonoya6@yahoo.com</a>	Universidad Central de Venezuela	Venezuela
Ruiz-Muller, Manuel	<a href="mailto:mruiz@spda.org.pe">mruiz@spda.org.pe</a>	Sociedad Peruana de Derecho Ambiental	Perú
Ryan, Matthew	<a href="mailto:m.ryan@cabi.org">m.ryan@cabi.org</a>	CABI	UK
Salmon-Mulanovich, Gabriela	<a href="mailto:gsalmonm@pucp.edu.pe">gsalmonm@pucp.edu.pe</a>	Universidad Peruana Cayetano Heredia	Perú
Schmidt, Thomas	<a href="mailto:schmidt@umich.edu">schmidt@umich.edu</a>	Michigan Microbiome Project	USA
Torres-Espinoza, Luis Felipe	<a href="mailto:lufelipeis@gmail.com">lufelipeis@gmail.com</a>	National Museum / Federal University of Rio de Janeiro	Brazil





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Tsukayama, Pablo	<a href="mailto:pablo.tsukayama@upch.pe">pablo.tsukayama@upch.pe</a>	Universidad Peruana Cayetano Heredia	Perú
Vonaesch, Pascale	<a href="mailto:pascale.vonaesch@swisstph.ch">pascale.vonaesch@swisstph.ch</a>	Swiss TPH	Switzerland
Zariquiey-Biondi, Roberto	<a href="mailto:rzariquiey@pucp.edu.pe">rzariquiey@pucp.edu.pe</a>	Pontificia Universidad Católica del Perú	Perú
Zhao, Liping	<a href="mailto:liping.zhao@rutgers.edu">liping.zhao@rutgers.edu</a>	Rutgers, the State University of New Jersey	USA