

CONFERENCE PROGRAMME

Day 1 - Wednesday, May 10th

MICROBIOME KEYNOTE

Chaired by Jane Foster



09:00-09:30



Nutritional Psychiatry and the Potential of Gut-focused Therapies for Mental Health

Felice Jacka

Alfred Deakin Professor, Deakin University

09:30-11:00

THE MICROBIOTA-GUT-BRAIN AXIS AND NEURODEVELOPMENT

Chaired by Rochellys Diaz Heijtz



09:30-09:55



Deciphering the role of early-life gut microbiota in neuro-glia-vascular development

Maria Rodriguez Aburto

Senior Lecturer, APC Microbiome Ireland/University College Cork

09:55-10:20



The microbiota-gut-brain axis in autism spectrum condition: faecal microbiota transplantation from humans with autism to germ-free mice increases repetitive behaviour and impairs spatial memory

Sylvie Rabot

Senior Scientist, Université Paris-Saclay, INRAE, AgroParisTech, Micalis Institute

10:20-10:45



Does the maternal microbiota program brain effects in neonatal mice?

Alexandra Castillo-Ruiz

Assistant Research Professor, Georgia State University

10:45-11:00



The Gut End of the Gut-Brain Axis: A Rich, Untapped Source of Druggable Targets

A. Stewart Campbell

CEO, Head of Research, Axial Therapeutics, Inc.

11:00-11:30



MORNING COFFEE BREAK

11:30-15:45

THE MICROBIOTA-GUT-BRAIN AXIS AND NEUROLOGICAL DISORDERS

Chaired by Aletta Kraneveld



11:30-11:55



Diet and multiple sclerosis: gut microbiota evolutionary ecology and peptidoglycan as a mediator

Jon Laman

Professor, University Medical Center Groningen

11:55-12:20



Brain-First versus Body-First biological subtyping in Parkinson's disease

Jacob Horsager

M.D., PhD., Aarhus University Hospital

12:20-12:45



Unveiling the role of short-chain fatty acids in Neural Homeostasis

Jessica Perego

MSCA Postdoctoral fellow / Ph.D., Neuroimmunology Unit, Institute of Experimental Neurology, Division of Neuroscience, San Raffaele Vita-Salute University and IRCCS San Raffaele Hospital, Milan, Italy

12:45-13:00



Microbial interventions for stress and Parkinson's Disease

Ted Dinan

Medical Director, Atlantia Clinical Trials

13:00-14:30



LUNCH & POSTERS

14:30-15:45



ROUNDTABLE DISCUSSIONS

Participants take part in topical small-group discussions, each led by a conference speaker or other expert in the field.



1) Challenges and future directions for the Microbiota-Gut-Brain Axis and Neurodevelopment

Moderated by Rochellys Diaz Heijtz



2) Challenges and future directions for the Microbiota-Gut-Brain Axis and Neurological Disorders

Moderated by Aletta Kraneveld



3) Challenges and future directions for Microbiota-Gut-Brain Axis -- Biological Pathways and Molecular Mechanisms

Moderated by Jonathan Swann



4) Challenges and future directions for Microbiota-Gut-Brain Axis and Psychiatric Disorders

Moderated by Jane Foster



5) Challenges and future directions for New Technologies for Studying the Gut-Brain Axis

Moderated by Eldin Jašarević

15:45-16:00



AFTERNOON BREAK

16:00-17:30

MICROBIOTA-GUT-BRAIN AXIS -- BIOLOGICAL PATHWAYS AND MOLECULAR MECHANISMS

Chaired by Jonathan Swann



16:00-16:25



Overcoming the brain barrier: a challenge for bacteria?

Roos Vandenbroucke

Associate Professor and Group Leader, Ghent University and VIB

16:25-16:50



Microbiota, memory, and mental health. Don't forget the viruses!

Jordi Mayneris Perxachs

Miguel Servet Researcher, Girona Biomedical Research Institute

16:50-17:15



Regulation of microbiota-derived GABA within the human gut ecosystem

Benoit Pugin

Senior Scientist, ETH Zürich, Switzerland

17:15-17:30



Research overview and future direction on the psychobiotic formulation Cerebiome®

Umar Haris Iqbal

Research Scientist / Pre-clinical Laboratory Manager, Lallemand

09:00-09:30

NEUROSCIENCE KEYNOTE

Chaired by Jane Foster



09:00-09:30



Brain's borders regulate how brain functions

Jonathan Kipnis

JC Investigator Alan A. and Edith L. Wolff Distinguished Professor of Pathology and Immunology Director, Brain Immunology and Glia (BIG) Center, Washington University School of Medicine in St. Louis

09:30-11:00

MICROBIOTA-GUT-BRAIN AXIS AND PSYCHIATRIC/COGNITIVE DISORDERS

Chaired by John Cryan



09:30-09:55



Microbiome-gut-brain axis signaling and PTSD: implications for prevention and treatment

Christopher A. Lowry

Associate Professor, University of Colorado Boulder

09:55-10:20



The gut microbiome endocannabinoid axis in severe mental illness: a focus on anhedonia

Amedeo Minichino

Senior Clinical Research Fellow, University of Oxford

10:20-10:45



Targeting the microbiome to reduce drug seeking in models of substance use disorders

Drew Kiraly

Associate Professor - Physiology, Pharmacology & Psychiatry, Wake Forest University School of Medicine

10:45-11:00



A randomised control trial to explore the effect of a multispecies probiotic on cognitive function and mood in healthy older adults

Jessica Eastwood

PhD, University of Reading

11:00-11:30



MORNING COFFEE BREAK

11:30-12:30

PANEL DISCUSSION

11:30-12:00



Panel 1: Perspectives on psychiatry & the microbiota-gut-brain axis (Moderator: John Cryan)

Panelists: Drew Kiraly, Felice Jacka, Christopher Lowry

12:00-12:30



Panel 2: Perspectives on neurology & the microbiota-gut-brain axis (Moderator: Jane Foster)

Panelists: Filip Scheperjans, Rochellys Diaz Heijtz, Aletta Kraneveld, Jon Laman

12:30-14:00



LUNCH & POSTERS

14:00-15:00

EMERGING TOPICS IN THE FIELD

Chaired by Filip Scheperjans



14:00-14:15



Neonatal gut microbiota and brain dysmaturation in preterm infants

Kadi Vaher

Postdoctoral Research Fellow, MRC Centre for Reproductive Health, University of Edinburgh

14:15-14:30



Selection of probiotic microorganisms with potential psychobiotic activity

Melania Casertano

PostDoc, University of Naples "Federico II", University of Wageningen

14:30-14:45



Sigma-1 receptor as a possible regulator of p-cresol-induced depression

Elene Zhuravliova

Associate Professor, Iliia State University; I.Beritashvili Center of Experimental Biomedicine

14:45-15:00



The fecal bacterial microbiota is associated with ADHD diagnosis in adults and use of psychostimulant medication in children

Miranda Stiernborg

PhD student, Karolinska Institutet

15:00-15:30



AFTERNOON BREAK

15:30-16:45

NEW TECHNOLOGIES FOR STUDYING THE GUT-BRAIN AXIS

Chaired by Eldin Jašarević



15:30-15:45



Photobiomodulation and the gut-brain axis: a novel non-invasive tool to modulate the gut microbiota

Silvia Arboleya

Postdoctoral Researcher, Instituto de Productos Lácteos de Asturias

15:45-16:10



An iPSC-derived microbiome-gut-brain axis on a microfluidic chip to model interactions in health and disease

Lena Sophie Koch

PhD Candidate, TechMed Centre, University of Twente

16:10-16:35



Kronos: Circadian Rhythmicity analysis in microbiome and other 'omics datasets

Thomaz F. S. Bastiaanssen

PhD, APC Microbiome Ireland, University College Cork, Department of Psychiatry and Neurobehavioural Science, University College Cork, Ireland

16:35-16:50



On the future of interventional strategies targeting the gut microbiota

Olaf Larsen

Senior Manager Science/Asst. Professor, Yakult Nederland B.V./VU Amsterdam

17:00-18:30



FILM: THE INVISIBLE EXTINCTION



POSTER PRESENTATIONS

THE MICROBIOTA-GUT-BRAIN AXIS AND PSYCHIATRIC DISORDERS

1. An RCT of Mediterranean diet for mental health symptoms of irritable bowel syndrome

Amy Loughman

Senior Research Fellow, Deakin University

2. A symptom-based approach to the pathophysiology of depression and anxiety: contributions of microbial and inflammatory factors

Ana Santos

PhD Candidate, The Royal Institute of Mental Health Research

3. A Phase 2, Double-blind, Placebo-controlled Study of the Safety and Efficacy of Microbial Ecosystem Therapeutic-2 (MET-2) in Patients with Depression

Arthi Chinna-Meyyappan

PhD Candidate, Queen's University

4. The gut-microbiome in adult ADHD - A meta analysis

Babette Jakobi

PhD Student, Radboudumc Nijmegen

5. The Gut Microbiome in Psychiatric Disorders: A Transdiagnostic Perspective

Danique Mulder

Research Assistant, Radboud University Medical Center

6. Systematic Review of Probiotics as an Adjuvant Treatment for Psychiatric Disorders

Evan Forth

PhD Student, Queen's University

7. Probiotics for patients with bipolar or schizophrenia spectrum disorder: a double-blind, randomized placebo-controlled trial

Jenny Borkent & Magda Ioannou

PhD Candidates, University of Groningen, University Medical Center Groningen

8. Stress-activated brain-gut circuits regulate intestinal inflammation and barrier permeability

Kenny Chan

Instructor, Icahn School of Medicine at Mount Sinai

9. Gut microbiome and dietary habits associated with psychological risk and resilience in mothers and children

Michiko Matsunaga

Postdoctoral Researcher, Graduate School of Medicine, Osaka University

10. The gut microbiome in patients with first episode psychosis

Miranda Stiernborg

PhD Student, Karolinska Institute

11. Gut microbiota contribution in anorexia nervosa pathophysiology

Petra Prochazkova

Researcher/PhD, Institute of Microbiology of the Czech Academy of Sciences/Laboratory of Cellular and Molecular Immunology, Institute of Microbiology of the Czech Academy of Sciences

12. How microbes shape eating behavior: an experimental animal model of anorexia nervosa

Radka Roubalová

Dr., Institute of Microbiology of the Czech Academy of Sciences

13. Impact of major depressive disorder and a low FODMAP diet on the microbiota

Simone O'Neill

HDR Student, University of Canberra - Research Institute for Sport and Exercise

14. Behavioural effects of a Mediterranean-based diet in postpartum dams stressed during pregnancy

Amanda Della Giustina

Postdoctoral Fellow, University of Ottawa

15. Effects of a Mediterranean-based diet on anxiety-like behaviours and intestinal estrogen receptors in adult female offspring stressed in utero

Amanda Della Giustina

Postdoctoral Fellow, University of Ottawa

16. Psychiatric and neurodevelopmental Disorders in offspring of mothers with Inflammatory Bowel Disease

Elin Skott

Phd Student, Karolinska Institute

17. Probiotic capacity to breakdown gluten-derived peptides for people with ASD

Eline van Ophem and Saskia van Hemert

R&D department, Winclove Probiotics

18. Investigating the Short and Long-Term Effects of Microbe Therapy on Sleep Disturbances in Individuals with Depression

Hayley Bromley

MSc Graduate Student, Queen's University

19. Unveiling the Gut-Brain Axis: Higher Collinsella Genus Abundance Linked to Lower Grey Matter Volume in Right Medial Frontal Cortex of Early-Stage Schizophrenia Patients

Lea Jakob

PhD Candidate, National Institute of Mental Health

20. Differential Effects of Microbiota Depletion on Anxiety-Related Neuronal Activation and Behaviour in Rodents

Loreto Olavarria-Ramirez

PhD Student, APC Microbiome Ireland, University College Cork

21. Ayahuasca-based psychedelic-assisted therapy for PTSD and its effects on the microbiome: a discovery cohort

Lyanna Kessler

PhD Candidate, University of Colorado Boulder

22. Prebiotic supplementation prevents food addiction development

Solveiga Samulėnaitė

PhD Student, Vilnius University, Pompeu Fabra University

23. What's Gaba got to do with it? A Potential link between the Microbiome, Schizophrenia and the Endocannabinoid System

Sondra Turjeman

Researcher, Azrieli Faculty of Medicine, Bar-Ilan University

24. Short-chain fatty acids improve inflammation and dysfunction of human microvascular

Wenjje Cai

PhD, Karolinska Institute

THE MICROBIOTA-GUT-BRAIN AXIS – BIOLOGICAL PATHWAYS AND MOLECULAR MECHANISMS/ TOOLS AND TECHNOLOGIES FOR STUDYING THE GUT-BRAIN AXIS

25. Probiotics supplementation to adult human small intestinal stoma microbiota causes dynamic increase in the community resistance to perturbations and nutrient utilization

Jack Jansma

PhD Candidate, Universiteit van Groningen

26. Sex Differences in the Microbiome-Gut-Brain Axis are Time-of-Day Dependent

Sarah Munyoki

Post-doctoral Scholar, Magee-Womens Research Institute, University of Pittsburgh School of Medicine

27. Human Microbiota Transplantation in a Mouse Model for Autism Spectrum Disorders: Effects of Different Dietary Interventions

Lucía Peralta Marzal

PhD Candidate, Utrecht University

28. Is ASD phenotype dependent on microbiome-induced immune activation? Preliminary results from a mouse model

Naika Prince

PhD Candidate, Utrecht Institute for Pharmaceutical Sciences

29. Gut microbial modulation in aged mice reverses hallmarks of the ageing gut, eye, and brain

Aimee Parker

Research Scientist, Quadram Institute Bioscience

30. High levels of serotonin promote the fitness of *Pseudomonas fluorescens* during oxidative stress

Anthi Psoma

PhD Candidate, University of Groningen

31. Faecal engraftment of autism spectrum microbiota samples has a minor effect on adult mice central nervous system

Aurelijus Burokas

Senior Researcher, Vilnius University

32. The impact of a *L.brevis* probiotic on brain and behavioural correlates of GABA in humans: A trial protocol

Claudia Rodriguez-Sobstel

Research Assistant, The University of Reading

33. Sex-and age-dependent alterations in motor, cognitive and affective behavior in mice associated with dysregulated brain expression of bacterial peptidoglycan-sensing molecules

Inés Martínez Sánchez

PhD Student, Karolinska Institute

34. Metabolomic profiling of psychobiotics for the production of neuromodulatory metabolites

Michael Harvey

Phd Student, University of Southampton

35. Beneficial effects of psychobiotics (*Lactobacillus helveticus* R0052 and *Bifidobacterium longum* R0175) on gut microbiota of mild anxious adults using microbiome model

Katia Sivieri

Postdoctorates, INRA-Rennes, France and UNESP/Professor of the Food Engineering and Nutrition Programs, UNESP/Biotechnology and Innovation in Health, UNIAN

36. Age and the microbiota-gut-brain axis: a non-human primate model of human ageing

Catherine Purse

PhD Student, Quadram Institute

37. P-cresol-induced depression-like changes involves changes in Dopamine transporter and its downstream signaling pathway

Natia Okriashvil

PhD Student, Ilia State University

38. Characterization of a human multi-organ-on-chip model to investigate bacterial gut-blood-brain extracellular vesicle transport

Laure Maes

PhD Student, VIB-UGent Center for Inflammation Research

39. Photobiomodulation and the gut-brain axis: a novel non-invasive tool to modulate the gut microbiota

Silvia Arboleya

PhD (Postdoctoral Researcher), Departamento de Microbiología y Bioquímica de Productos Lácteos, Instituto de Productos Lácteos de Asturias (IPLA-CSIC)

THE MICROBIOTA-GUT-BRAIN AXIS AND NEURODEVELOPMENT/ THE MICROBIOTA-GUT-BRAIN AXIS AND NEUROLOGICAL DISORDERS

40. The sleeping microbiome: narcolepsy overlook

Janet Ježková

PhD Student, Institute of Microbiology of the Czech Academy of Sciences

41. Links Between the Gut Microbiota, Innate Immunity, and Amyloid - Toxicity in Caenorhabditis elegans Models

Laura Freeman

PhD Student, University of Kent

42. The role of the microbiome-gut-brain axis in chemotherapy-associated behavioural impairments

Sarah-Jane Leigh

Postdoctoral Fellow, APC Microbiome Ireland

43. High-fibre diet improves behavioural performance and demonstrates therapeutic potential in Huntington's disease

Carolina Gubert

Research Officer, The Florey Institute of Neuroscience and Mental Health

44. Akkermansia in Parkinson's disease: friend or foe?

Markus Schwalbe

PhD Candidate, Groningen Biomolecular Sciences and Biotechnology Institute (GBB), University of Groningen

45. Gut Microbiome Predicts Cognitive Function and Depressive Symptoms in Late Life

Antonija Kolobaric

PhD Candidate, University of Pittsburgh

46. Nasal dysbiosis and Alzheimer's disease

Veronika Górová

Doctoral Researcher, A. I. Virtanen Institute for Molecular Sciences, University of Eastern Finland

47. The effect of the microbiome on lowering aggressive behavior in Drosophila melanogaster

Rachel Levin

PhD, Azrieli Faculty of Medicine, Bar-Ilan University

48. Selection of probiotic microorganisms with potential psychobiotic activity

Melania Casertano

PostDoc, University of Naples "Federico II", University of Wageningen

49. Perturbation of maternal gut microbiota in mice during a critical perinatal window influences early neurobehavioral outcomes in offspring

Cassandre Morel

PhD Candidate, University of Rouen Normandy, INSERM

50. The role of the gut microbiota in neurodevelopment: patients with Kleeftstra syndrome

Mirjam Bloemendaal

Post-doctoral Researcher, Radboudumc

51. Microbiota-brain axis and behavior: the impact of maternal high-fat diet on offspring neurodevelopment

Gintarė Urbonaitė

Phd Student, Vilnius University

52. Brain-Body Crosstalk: Characterizing Gut Microbial Dysbiosis in Autism Spectrum Disorder (ASD) and Attention-Deficit/Hyperactivity Disorder (ADHD)

Miruna Jurj

Graduate Student, Centre for Neuroscience Studies, Queen's University; Queen's Genomics Lab at Ongwanada (QGLQ), Ongwanada Resource Center

53. Promoting healthy neurodevelopment through the maternal microbiome

Sarah Perego

Master Student, Karolinska Institute

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