

Exploring Human Host-Microbiome Interactions in Health and Disease 13-15 September 2017

Wellcome Genome Campus,
Hinxton, Cambridge, UK

Conference Programme

Wednesday 13 September 2017

- 11:30-12:30** **Registration with lunch**
- 12:30-12:45** **Welcome and introduction**
Gregor Reid
Western University and Lawson Health Research Institute, Canada
- 12:45-13:45** **Keynote lecture**
Chair: Gregor Reid
Translational microbiome science meets the patient – what else do we need to know?
Patricia Hibberd
Boston University School of Public Health, USA
- 13:45-15:30** **Session 1: Fecal transplants get interesting**
Chair: Karen Scott
- 13:45 Faecal microbiota transplantation - expect the unexpected?
Gillian Gardiner
Waterford Institute of Technology, Ireland
- 14:15 Microbiome sampling and processing – getting it right from the start
Joel Dore
INRA, France
- 14:45 Fecal microbiota transplant: the search for the basis of the cure
Bastian Hornung
Leiden University Medical Center LUMC, The Netherlands
- 15:00 Discussion
- 15.30-16:00** **Afternoon tea**

16:00-17:30

Session 2: Beyond the gut microbiome: local and distant effects

Chair: Karen Scott

16:00 Mapping microbiomes at the micron scale

Gary Borisy

The Forsyth Institute, USA

16:30 The connection between the oral microbiome and chronic inflammatory diseases

Taco van der Meulen

UMC Groningen, The Netherlands

17:00 Diet and host-microbiome interaction in healthy individuals

Ville Pimenoff

ICO-IDIBELL, Spain

17:15 Dynamics of the intestinal microbiota during selective and total gut decontamination as graft-versus-host prophylaxis in the course of stem cell transplantation

Romy Zwittink

Leiden University Medical Centre, The Netherlands

17:30-18:00

Lightning talks

Chair: Gregor Reid

18:00-19:30

Poster session 1 (odd numbers) with drinks reception

19:30

Dinner

Hall Restaurant

Thursday 14 September 2017

09:00-10:30

Session 3: Bacterial interactions: how, what, where?

Chair: Catherine O'Neil

09:00 Understanding bacterial interactions with prebiotics: the new definition

Karen Scott

University of Aberdeen, UK

09:30 Host, viral and bacterial interactions in the female genital tract

Charu Kaushic

McMaster University, Canada

10:00 *Streptococcus lutetiensis* and diarrheal infection in African and Asian children

Mathieu Almeida

University of Maryland Baltimore, USA

10:15 The microbiota continuum along the female reproductive tract and its relation to uterine-related diseases

Huijue Jia

BGI-Shenzhen, China

- 10:30-11:00** **Morning coffee**
- 11:00-12:15** **Session 4: Host-pathogen-commensal dynamics**
Chair: Catherine O'Neil
- 11:00 Duelling with *Staphylococcus aureus*; new insights into the host-bacteria relationship
Joanne Pennock,
University of Manchester, UK
- 11:30 Gut microbial colonization and child development
Carolina de Weerth
Radboud University, The Netherlands
- 12:00 Antibiotic exposure in neonates and impact on gut microbiota and antibiotic resistance development: a systematic review
Jon Widding Fjalstad
University Hospital of North Norway, Norway
- 12:15-13:45** **Lunch and meet the speakers**
Hall Restaurant
- 13:45-15.15** **Session 5: Bioremediation**
Chair: Colin Hill
- 13:45 Microbial detoxification of arsenic
Jana Jass
Örebro University, Sweden
- 14:15 Biodegradation and metabolism of pharmaceuticals by environmental bacteria
Paula Castro
Universidade Católica Portuguesa, Portugal
- 14:45 *Lactobacillus salivarius* secretes a protein that inhibits the growth of *Shigella* in culture
O Colin Stine
University of Maryland Baltimore, USA
- 15:00 Dynamics of the airway microbiome in the first five years of life
Shu Mei Teo
Baker Heart and Diabetes Institute, Australia
- 15:15-15:45** **Afternoon tea**
- 15:45-16:45** **Session 6: Non-bacterial microbiomes**
Chair: Colin Hill
- 15:45 Bacteriophages and microbial ecosystems: what's new in the gut?
Laurent Debarbieux
Institut Pasteur, France

16:15 The gut mycobiome in human health and disease: recent developments and future perspectives
Pauline Scanlan
University College Cork, Ireland

16:45 Comfort break

17:00-18:00 **Session 7: Debate: How to move beyond association to causality**
Chair: Gregor Reid

Aim to session: to review the evidence for altered microbiome causing disease – discuss what experiments to do to move from association/correlation to cause

Searching for the holy grail in microbiome research – causation, or will it be death by association?

Julian Marchesi
Cardiff University/Imperial College London, UK

18:00-18:30 **Lightning talks**
Chair: Gregor Reid

18:30-20:00 **Poster session 2 (even numbers) with drinks reception**

20:00 **Dinner**
Hall Restaurant

Friday 15 September 2017

09:00-10:45 **Session 8: Functionality within the microbiome**
Chair: Patricia Hibberd

09:00 Using foods and microbial metabolites to alter disease course
Laure Bindels
Université catholique de Louvain, Belgium

09:30 Modelling and simulation in microbial ecology and microbiomes
Thomas Curtis
Newcastle University, UK

10:00 Integrated systems biology to study the contribution of the gut microbiome to steatosis in obese women
Lesley Hoyles
Imperial College London, UK

10:15 Heritability of antibiotic resistance potential in the gut microbiome
Caroline Le Roy
King's College London, UK

10:30 Loss of sporulation and reductive genome evolution amongst host-associated bacteria promotes adaptation to body habitats
Hilary Browne
Wellcome Trust Sanger Institute, UK

10:45-11:15 **Morning coffee**

11:15-12:30 **Session 9: Translating microbiome science to impact global populations**
Chair: Patricia Hibberd

11:15 The research and development of Yoba to produce fermented food
Remco Kort
TNO, The Netherlands

11:45 Probiotics as an alternative to antibiotics used in aquaculture in developing countries
Li Oon Chuah
Universiti Sains Malaysia, Malaysia

12:15 Discussion and closing remarks

12:30-13:30 **Lunch**
Hall Restaurant

13:30 **Coaches to Cambridge and Heathrow Airport via Stansted Airport depart**
Outside the Conference Centre