## Microbiota and Health

### Monday 14 November, 2022

## **Registration and Welcome**

10:00 Registration and poster mounting

12:00-13:00 Lunch

13:00-14:00 Welcome and one-minute introductions by course participants

Björn Schröder, Umeå University

Valentina Tremaroli, University of Gothenburg

#### **Introduction to Microbiota**

Chairperson:

14:00-14:45 Introduction to Microbiomes

Björn Schröder

Department of Molecular Biology, Umeå University, Sweden

14:45-15:00 Questions and discussion

15:00-15:15 Coffee

15:15-16:00 Microbiome Study Design and Data Analysis

Valentina Tremaroli

Department of Molecular and Clinical Medicine, University of Gothenburg, Sweden

16:00-16:15 Questions and discussion

16:15-17:15 Our Microbiome: Targets and Therapies for the Gastrointestinal Tract

(Online lecture) Willem de Vos

Human Microbiome Research Program, University of Helsinki, Finland Laboratory of Microbiology, Wageningen University, The Netherlands

17:15-17:30 Questions and discussion

17:30-18:00 Break

18:00-20:00 Dinner

20:00-21:00 Host-Bacterial Mutualism and Development of Symbioses

**Edward Ruby** 

Carnegie Institution for Science, California Institute of Technology, Church

Laboratory, Pasadena, CA, USA

# Tuesday 15 November, 2022

# **Gut Microbiota in Health and Disease**

| 8:30-9:15   | Gut Microbiota and Health During Lifespan   |  |  |
|-------------|---|--|--|
| 0.50 3.13   | Anne Salonen  |  |  |
|             | Human Microbiome Research Program, Faculty of Medicine, University of Helsinki,                   |  |  |
| 9:15-9:30   | Helsinki, Finland  Questions and discussion   |  |  |
| 9:30-10:15  | Mucins and the Microbiome   |  |  |
| 3.30 10.13  | Gunnar Hansson  |  |  |
|             | Department of Medical Biochemistry and Cell Biology, University of Gothenburg,                    |  |  |
| 10:15-10:30 | Sweden  Questions and discussion  |  |  |
|             |   |  |  |
| 10:30-10:45 | Coffee  |  |  |
| 10:45-11:30 | Gut Microbiota-Brain Axis   |  |  |
|             | María Rodriguez Aburto APC Microbiome Ireland, Department of Anatomy and Neuroscience, University |  |  |
|             | College Cork, Ireland   |  |  |
| 11:30-11:45 | Questions and discussion  |  |  |
|             |   |  |  |
| 11:45-13:30 | Lunch   |  |  |
| 13:30-14:30 | Poster Session I  |  |  |
|             | 3 poster walks in groups in parallel (5 min presentation + 5 min questions)                       |  |  |
| 14:30-15:15 | Free poster viewing of "posters of the day"   |  |  |
| 15:15-15:30 | Coffee  |  |  |
| 15:30-16:15 | Microbiota Interactions with the Intestinal Epithelium during Infection                           |  |  |
|             | Mariana Byndloss  Vanderbilt Institute for Infection, Immunology and Inflammation, Department of  |  |  |
|             | Pathology, Microbiology, and Immunology, Vanderbilt Microbiome Innovation                         |  |  |
| 16.15 16.20 | Center, Vanderbilt University, Nashville, TN USA  Questions and discussion                        |  |  |
| 16:15-16:30 |   |  |  |
| 16:30-17:15 | Cohort digital health data to understand microbiome-host interactions  Elin Org                   |  |  |
|             | Estonian Genome Centre, Institute of Genomics, University of Tartu, Estonia                       |  |  |
| 17:15-17:30 | Questions and discussion  |  |  |
| 17:30-18:00 | Break   |  |  |
| 18:00-20:00 | Dinner  |  |  |
|             |   |  |  |

## Wednesday 16 November, 2022

#### Microbiota Beyond Bacteria

Chairperson: Host

8:30-9:15 Gut virome – who is there and what are they doing? (On-line lecture)

Colin Hill

APC Microbiome Ireland and School of Microbiology, University College Cork,

Ireland

9:15-9:30 Questions and discussion

9:30-10:15 Host-associated Archaeome (Online lecture)

Christine Moissl-Eichinger

Diagnostic and Research Institute of Hygiene, Microbiology and Environmental Medicine, Medical University Graz, Austria and BioTechMed, Graz, Austria

10:15-10:30 Questions and discussion

10:30-10:45 Coffee

### **Studying and Harnessing the Microbiota**

Chairperson:

10:45-11:30 From Association to Causality: the Role of the Gut Microbiota on Host

Metabolism Fredrik Bäckhed

Department of Molecular and Clinical Medicine, University of Gothenburg,

Sweden

11:30-11:45 Questions and discussion

11:45-13:30 Lunch

13:30-14:30 Poster Session II

3 poster walks in groups in parallel (5 min presentation + 5 min questions)

14:30-15:15 Free poster viewing of "posters of the day"

15:15-15:30 Coffee

## Studying and Harnessing the Microbiota (continued)

Chairperson:

15:30-16:15 Animal Models to Study Microbiomes (On-line lecture)

Aaron Ericsson

Department of Veterinary Pathobiology, Metagenomics Center, and Mutant Mouse Resource and Research Center, University of Missouri, Columbia, MO

16:15-16:30 Questions and discussion

16:30-17:15 Prebiotics and Probiotics

**Amandine Everard** 

Metabolism and Nutrition Research Group, Louvain Drug Research Institute, Walloon Excellence in Life Sciences and BIOtechnology (WELBIO), UCLouvain,

Université catholique de Louvain, Brussels, Belgium

17:15-17:30 Questions and discussion

17:30-18:00 Break 18:00-20:00 Dinner

## Thursday 17 November, 2022

### **Microbial Therapeutics and Therapeutic Targets**

|  | Chair | pers | on: |
|--|-------|------|-----|
|--|-------|------|-----|

| 8:30-9:15 Citizen-Science Map of the Vaginal Microbiome | : the Isala Study |
|---|-------------------|
|---|-------------------|

Sarah Lebeer

Department of Bioscience Engineering, Research Group Environmental Ecology and

Applied Microbiology, University of Antwerp, Belgium

9:15-9:30 Questions and discussion

9:30-10:15 Interactions between Drugs and the Human Gut Microbiota (On-line lecture)

Lisa Maier

Interfaculty Institute of Microbiology and Infection Medicine and Cluster of Excellence 'Controlling Microbes to Fight Infections', University of Tübingen, Tübingen, Germany

10:15-10:30 Questions and discussion

10:30-10:45 Coffee

10:45-11:30 Fecal Microbiota Transplantation

Max Nieuwdorp

Department of Internal and Vascular Medicine, Amsterdam University Medical

Centres, The Netherlands

11:30-11:45 Questions and discussion

11:45-13:30 Lunch

13:30-14:30 Poster Session III

3 poster walks in groups in parallel (5 min presentation + 5 min questions)

14:30-15:15 Free poster viewing of "posters of the day"

15:15-15:30 Coffee

## **Building Microbial Communities – Session I**

#### Chairperson:

| 15:30-16:15 | Genetic Adaptations bety | ween Hosts and their N | Microbiota (On-line lecture) |
|-------------|--------------------------|------------------------|------------------------------|
|-------------|--------------------------|------------------------|------------------------------|

Ruth Ley

Department of Microbiome Science, Max Planck Institute for Biology, Tübingen, Germany; Cluster of Excellence EXC 2124 Controlling Microbes to Fight Infections,

Tübingen, Germany

16:15-16:30 Questions and discussion

16:30-17:15 Collaboration and Competition in Host Microbiomes

Erik Bakkeren

Department of Zoology and Department of Biochemistry, University of Oxford, UK

17:15-17:30 Questions and discussion

17:30-18:00 Break

18:00-20:00 Course Dinner

## Friday 18 November, 2022

## **Building Microbial Communities – Session II**

#### **Chairperson:**

8:30-9:15 Rethinking Healthy Eating in Light of the Gut Microbiome

Pascale Vonaesch

Department of Fundamental Microbiology, University of Lausanne, Bâtiment Biophore

Campus UNIL-Sorge, Lausanne, Switzerland

9:15-9:30 Questions and discussion

## Microbiota Beyond the Gut

**Chairperson:** 

9:30-10:15 Oral Microbiota in Health and Disease

Toni Gabaldón

Institute for Research and Biomedicine (IRB), The Barcelona Institute of Science and

Technology (BIST) and Barcelona Supercomputing Centre (BCS-CNS), Spain

10:15-10:30 Questions and discussion

10:30-10:45 Coffee

10:45-11:30 Microbiota and Skin Health

Jürgen Harder

Department of Dermatology, Kiel University, Germany

11:30-11:45 Questions and discussion

11:45-13:00 Lunch

13:00:13:30 Concluding remarks, evaluation, and course certificates

14:00 Departure