

# PROGRAMME

updated 26/09/2022

## MONDAY 14 NOVEMBER 2022

13:00 – 13:15	Opening of the <b>9th Beneficial Microbes Conference</b>
13:15 – 14:15	Plenary session <i>Beneficial microbes: new and unexpected insights</i>
14:15 – 15:15	Plenary session <i>Postbiotics, definition and scope – a panel debate</i>
15:15 – 15:45	Networking break & poster viewing
15:45 – 17:05	Plenary session <i>Beneficial microbes and early life</i>
17:05 – 17:30	Speed presentations <i>Short presentations by selected poster presenters</i>
17:30 – 19:00	Poster viewing & drinks

## TUESDAY 15 NOVEMBER 2022

08:45 – 10:30	Session 1 <i>Beneficial microbes in animal health and nutrition – Part 1</i>	Session 2 <i>Beneficial microbes and human health – Part 1</i>
10:30 – 11:00	Networking break & poster viewing	
11:00 – 12:45	Session 3 <i>Bacteriophage-bacteria interactions in the gut</i>	Session 4 <i>Beneficial microbes in personal care</i>
12:30 – 14:00	Lunch break & poster viewing	
14:00 – 15:45	Session 5 <i>Beneficial microbes and the gut-brain-axis</i>	Session 6 <i>Towards renewable-based prebiotics</i>
15:45 – 16:15	Networking break & poster viewing	
16:15 – 17:35	<i>Pre- and probiotics in animal health and nutrition – Part 2</i>	Session 8 <i>Beneficial microbes and human health – Part 2</i>
20:00 – 22:00	Conference dinner (reservations only)	

## WEDNESDAY 16 NOVEMBER 2022

08:45 – 10:30	Plenary session <i>Structure and function of non-digestible carbohydrates in the gut microbiome in co-operation with ILSI Europe</i>
10:30 – 11:00	Networking break & poster viewing
11:00 – 12:00	Plenary session <i>Beneficial microbes and healthy ageing</i>
12:00 – 12:20	Closing keynote
12:20 – 12:30	Top five lessons learned
12:30	Closing of the <b>9th Beneficial Microbes Conference</b>

## **MONDAY 14 NOVEMBER 2022**

13:00 Introduction to the 9th Beneficial Microbes Conference  
Prof. Koen Venema, Maastricht University, the Netherlands

### **PLENARY SESSION BENEFICIAL MICROBES – NEW AND UNEXPECTED INSIGHTS**

Chair: Prof. Koen Venema, Maastricht University, the Netherlands

13:15 Role of the lung microbiome in CNS autoimmunity  
Dr Francesca Odoardi, Institute for Neuroimmunology and Multiple Sclerosis Research,  
University Medical Center Göttingen, Germany

13:35 Genetics and exposome factors shaping the Dutch microbiome landscape  
Prof. Alexandra Zhernakova, Department of Genetics, University Medical Center Groningen,  
the Netherlands

13:55 Polyunsaturated fatty acids as prebiotics and the concept of the 'correct prebiotic diet':  
innovation or confirmation?  
Dr Lara Costantini, Department of Ecological and Biological Sciences, Tuscia University, Italy

### **PLENARY SESSION POSTBIOTICS, DEFINITION AND SCOPE – A PANEL DEBATE**

14:15 – 15:15 Speakers and panellists to be announced.

15:15 – 15:45 Networking break & poster viewing

### **PLENARY SESSION BENEFICIAL MICROBES AND EARLY LIFE**

Chair: Dr Guus Roeselers, Danone Nutricia Research, the Netherlands

15:45 The ying and yang of microbiome signatures in early life  
Prof. Lindsay Hall, Quadram Institute, UK

16:05 The respiratory microbiome in early life: key to infection protection  
Prof. Debby Bogaert, Centre for Inflammation Research, The University of Edinburgh, UK

16:25 Using probiotics for maternal depression  
Prof. Sabina Fijan, Faculty of Health Sciences, University of Maribor, Slovenia

16:45 The gut microbiota and the maternal immune response in pregnant mice; effect of antibiotics  
and probiotics  
Dr Marijke Faas, Division of Medical Biology, Department of Pathology and Medical Biology,  
University of Groningen and University Medical Centre Groningen, the Netherlands, the  
Netherlands

### **PLENARY SESSION SPEED PRESENTATIONS**

17:05 – 17:30 Short presentations (5-minutes) by selected poster presenters to provide an overview  
of their research and inspire the audience to visit their posters.

Chair: Dr Guus Roeselers, Danone Nutricia Research, the Netherlands

## TUESDAY 15 NOVEMBER 2022

### SESSION 1

#### PRE- AND PROBIOTICS IN ANIMAL HEALTH AND NUTRITION – PART 1

Chair: Dr Frédérique Chaucheyras-Durand, Lallemand, France

- 08:45 Evolution of the microbiome in female dogs around parturition and in early lactation  
Quentin Garrigues, École Nationale Vétérinaire de Toulouse, France
- 09:05 Gut neuroimmune axis and the microbiota: elucidating crosstalk to control bacterial infections in poultry  
Dr Melha Mellata, Department of Food Science and Human Nutrition, Iowa State University, USA
- 09:25 Plant extracts: gut microbiota and beyond  
Naiana Einhardt Manzke, Animal Health Concepts, the Netherlands
- 09:45 King of the Hill – modulating the rainbow trout microbiome  
Dr Kasper Rømer Villumsen, Department of Veterinary and Animal Sciences, University of Copenhagen, Denmark
- 10:05 The role of probiotics and prebiotics in health maintenance in mass-reared insects  
Carlotta Savio, Wageningen University & Research, the Netherlands and INRAE, France
- 10:30 Networking break & poster viewing

### SESSION 2

#### BENEFICIAL MICROBES IN HUMAN HEALTH – PART 1

Chair: Dr Emily Hollister, Diversigen Inc., USA

- 08:45 Impact of a maternal supplementation with prebiotics on the microbiota, the immune system and allergy development in offspring  
Dr Carole Brosseau, Biopolymères Interactions Assemblages, INRAE, France
- 09:05 Immunomodulation by biotics: preventive effect against rotavirus infection  
Prof. Francisco J. Pérez Cano, Department of Biochemistry and Physiology, University of Barcelona, Spain
- 09:25 Can irritable bowel syndrome (IBS) in obese patients be treated with probiotics?  
Dr Goran Hauser, Department of Gastroenterology, University of Rijeka, Croatia
- 09:45 *Clostridium butyricum* MIYAIRI588® strain, as a potential live biotherapeutic product – stimulation of cancer immunotherapy  
Prof. Shigeru Kamiya, Department of Infectious Diseases, Kyorin University School of Medicine, Japan
- 10:05 Submitted abstracts:
- Effect of gut microbiota of children with autism spectrum disorder on behaviour and ASD-related biological markers in germ-free mice  
Léa Roussin, Mycalis Institute, INRAE, France
  - Pre- and probiotics to relieve constipation-related complaints in irritable bowel syndrome  
Maartje van den Belt, Food and Biobased Research, Wageningen University & Research, the Netherlands
- 10:30 Networking break & poster viewing

## TUESDAY 15 NOVEMBER 2022

### SESSION 3

#### BACTERIOPHAGE-BACTERIA INTERACTIONS IN THE GUT

Chair: Dr Sabrina Green, Department of Biosystems, KU Leuven, Belgium

11:00 Bacteriophages in the human gut microbiome: opportunities or threats?  
Dr Evelien Adriaenssens, Quadram Institute, UK

11:20 to be announced

11:40 Development of phage-based feed additives to enhance fed cattle health and performance  
Dr Jacques Mathieu, Rice University, USA

12:00 Manufacturing and formulation of bacteriophages for oral dosage forms  
Dr Danish Malik, Loughborough University, UK

12:20 Developing a library of phages to target *Enterobacteriaceae* pathogens  
Dr Sabrina Green, Department of Biosystems, KU Leuven, Belgium

12:45 Lunch break & poster viewing

### SESSION 4

#### PRE-/PROBIOTICS IN PERSONAL CARE

Chair: Dr Thomas D. Leser, Human Health Innovation, Chr Hansen A/S, Denmark

11:00 Development of an in vitro model for screening of cosmetic ingredients with prebiotic potential  
Maria João Carvalho, Center for Biotechnology and Fine Chemistry, Universidade Católica Portuguesa, Portugal

11:20 title to be confirmed  
Dr Laura Huuskonen, IFF, Finland

11:40 Nitrate as a prebiotic and nitrate-reducing bacteria as probiotics for the oral microbiome  
Dr Bob Rosier, Department of Health and Genomics, FISABIO Foundation, Spain

12:00 The potential of precision probiotic *Hafnia alvei* HA4597 to support weight loss  
Nina Vinot, TargEDys, France

12:20 Submitted abstracts:

- The skin microbiome in atopic dermatitis patients in Belgium and how to modulate it with probiotics  
Lize Delanghe, University of Antwerp, Belgium
- Effect of 10-12 months supplementation with the probiotic *Lactobacillus rhamnosus*, LGG® (DSM33156) and *L. paracasei* subsp. *paracasei*, L. CASEI 431® (DSM33451) and arginine on caries increment in healthy children: A randomized, parallel-grouped, placebo-controlled clinical trial  
Camilla Juhl Pørksen, University of Copenhagen, Denmark

12:45 Lunch break & poster viewing

## **TUESDAY 15 NOVEMBER 2022**

### **SESSION 5 BENEFICIAL MICROBES AND THE GUT-BRAIN AXIS**

Chair: Prof. Michiel Kleerebezem, Host-Microbe Interactomics, Wageningen University & Research, the Netherlands

- 14:00 An apple a day keeps the psychiatrist away  
Prof. Iris Sommer, Research Institute Brain and Cognition, University Medical Center Groningen, the Netherlands
- 14:20 The microbiome and cognition domains  
Prof. José -Manuel Fernández-Real, Department of Medical Sciences, University of Giron, Spain
- 14:40 Anxiolytic effects of a daily prebiotic in healthy young female volunteers  
Dr Kathrin Cohen-Kadosh, School of Psychology, University of Surrey, UK
- 15:00 Investigating the role of the gut microbiota on neurodevelopmental diseases, the case for ADHD  
Dr Alejandro Arias Vásquez, Donders Institute for Brain, Cognition and Behaviour, Radboudumc, the Netherlands
- 15:20 title to be confirmed  
Prof. Roosmarijn Vandenbroucke, Department of Biomedical Molecular Biology, Ghent University, Belgium
- 15:45 Networking break & poster viewing

### **SESSION 6 TOWARDS RENEWABLE-BASED PREBIOTICS**

Chair: Dr Arthur Ouwehand, IFF, Finland

- 14:00 Prebiotic tea phenolics: gut microbial conversions, renewable sourcing, and sustainable extraction  
Dr Wouter de Bruijn, Department of Agrotechnology and Food Sciences, Wageningen University & Research, the Netherlands
- 14:20 Cello-oligosaccharides: potential prebiotics and their biosynthesis from renewable carbohydrate-based resources  
Dr Chao Zhong, Institute of Biotechnology and Biochemical Engineering, Graz University of Technology, Austria
- 14:40 title to be confirmed  
Prof. Koen Venema, Maastricht University, the Netherlands
- 15:00 Biomass as a renewable source of prebiotics  
Prof. James Clark, Department of Chemistry, University of York, UK
- 15:20 to be announced
- 15:45 Networking break & poster viewing

## TUESDAY 15 NOVEMBER 2022

### SESSION 7

#### PRE- AND PROBIOTICS IN ANIMAL HEALTH AND NUTRITION – PART 2

Chair: Prof. Richard Ducatelle, Department of Pathology, Bacteriology and Poultry Diseases, Ghent University, Belgium

16:15 Beneficial impact of *Saccharomyces boulardii* I-1079 probiotic on functionally important gut anaerobes, experimental proofs  
Dr Frédérique Chaucheyras-Durand, Lallemand SAS and Clermont Auvergne University, INRAE, France

16:35 Proposed links between diet-related risk factors for tail biting in pigs via the microbiota-gut-brain axis  
Dr Cecilie Kobek-Kjeldager, Department of Animal Science, Aarhus University, Denmark

16:55 Novel molecular mechanisms from wildlife probiotics to inform immunomodulatory microbiome therapies  
Dr Jorge Gutierrez-Merino, Department of Nutritional Sciences, University of Surrey, UK

17:15 to be announced

### SESSION 8

#### BENEFICIAL MICROBES IN HUMAN HEALTH – PART 2

Chair: Dr Jiro Nakayama, Department of Bioscience and Biotechnology, Kyushu University, Japan

16:15 Probiotic *Bifidobacterium* in the prevention of cognitive impairment – clinical evidence and mechanism studies  
Dr Jinzhong Xiao, Morinaga Milk, Japan

16:35 Advanced analysis for identification of key microbial biomarkers in microbiome data from clinical trials  
Dr Eline Klaassens, BaseClear, the Netherlands

16:55 Gut barriers and postbiotics, what can be learnt by the zebrafish model  
Dr Emmanuelle Apper, Lallemand SAS, France

17:15 Submitted abstracts:

- The human milk oligosaccharide 2'-fucosyllactose alleviates liver steatosis, ER stress and insulin resistance by reducing hepatic diacylglycerols and improved gut permeability in obese Ldlr<sup>-/-</sup>.Leiden mice  
Eveline Gart, TNO, the Netherlands
- *Lactocaseibacillus casei* isolate from the human respiratory tract as potential probiotic against cystic fibrosis  
Eline Cauwenberghs, Department of Bioscience Engineering, University of Antwerp, Belgium

## WEDNESDAY 16 NOVEMBER 2022

### PLENARY SESSION

#### STRUCTURE AND FUNCTION OF NON-DIGESTIBLE CARBOHYDRATES IN THE GUT MICROBIOME (in co-operation with ILSI Europe)

Chair: Dr Alexandra Meynier, Mondelēz International, France

08:45 Introduction by the chair

08:55 Structure-function relationships in dietary carbohydrates: what do we know and what do we need to know?  
Prof. Robert Rastall, Department of Food and Nutritional Sciences, University of Reading, UK

09:15 Systemic effects of prebiotics  
Prof. Koen, Venema, Department of Human Biology, University of Maastricht, the Netherlands

09:35 Modelling prebiotic activity  
Dr Maria Wiese, Department of Microbiology and Systems Biology, TNO, the Netherlands

09:55 Future prebiotics: enabling technologies  
Dr Javier Moreno, Institute of Food Science Research, Universidad Autonoma de Madrid, Spain

10:15 Q&A

10:30 **Networking break & poster viewing**

### PLENARY SESSION

#### BENEFICIAL MICROBES AND HEALTHY AGEING

Chair: Prof. Michiel Kleerebezem, Host-Microbe Interactomics, Wageningen University & Research, the Netherlands

11:00 Microbiome and neurological disorders: Alzheimer's and ageing  
Prof. Satya Prakash, Department of Biomedical Engineering, McGill University, Canada

11:20 Nutritional strategies for health promotion in elderly; present and future of the 'biotics' family  
Dr Miguel Gueimonde, Department of Microbiology and Biochemistry of Dairy Products, Instituto de Productos Lácteos de Asturias (IPLA-CSIC), Spain

11:40 title to be confirmed  
Dr Isabelle Savary-Auzeloux, Unité Nutrition Humaine, Université Clermont Auvergne, INRAE, France

### CLOSING KEYNOTE

12:00 title to be confirmed  
Dr Patrick Veiga, INRAE, France

12:20 Top five lessons learned  
Prof. Koen Venema, conference chair

12:30 Closing of the **9th Beneficial Microbes Conference**