Beneficial impact of PRE- and PROBIOTICS on Human and Animal Health
WELCOME

It’s with great pleasure that we announce the upcoming 4th Beneficial Microbes Conference, to be held in The Hague, the Netherlands, on 16-18 March 2015.

Over the past two decades, the microbiota in the gastrointestinal tract of humans and animals has been increasingly shown to be important for health and disease. Moreover, the benefit of probiotics and prebiotics has been shown in various areas, such as allergy, obesity, inflammatory disease, brain development, competitive exclusion of pathogens, stool habit, etc. Furthermore, probiotics and prebiotics are used in infant formula to direct the development of the endogenous microbiota or the infant’s mucosal immune system. Several studies on how probiotics might work have been recently published. The role of prebiotics in directing the composition and activity of the endogenous microbiota is also studied widely.

The 4th Beneficial Microbes Conference will highlight the most recent advances in the understanding of the mechanisms behind the health benefit of probiotics and prebiotics and how the endogenous microbiota influences health and disease. Specific topic areas in humans and animals include beneficial microbes and host metabolism, gut-brain communication, immune modulation, oral and gut health, as well as application of beneficial microbes and effects on drug efficacy. Moreover, the results from several international consortia working on probiotics and prebiotics will be presented in a dedicated session.

We aim at a networking meeting to inform you on the latest scientific developments and the industry’s requirements, and to create a global platform for new initiatives for the application of beneficial microbes in the food, feed and healthcare industry.

The Advisory Committee and Organising Committee are looking forward to meeting you!

ADVISORY COMMITTEE
Dr. Frederique Chaucheyras-Durand, Lallemand, France
Dr. Gabriele Hörmansperger, Technische Universität München, Germany
Dr. David Keller, Ganeden Biotech, Inc., USA
Prof.dr. Jan Knol, Danone and Wageningen UR, the Netherlands
Dr. Annick Mercenier, Nestlé Research Center, Switzerland
Dr. Jiro Nakayama, Kyushu University, Japan
Dr. Gregor Reid, University of Western Ontario, Canada
Prof.dr. Jerry Wells, Wageningen UR, the Netherlands

ORGANISING COMMITTEE
Helena B. Bastiaanse, M.Sc., Bastiaanse Communication, the Netherlands
Dr. Bart Keijser, TNO, the Netherlands
Dr. Marjorie Koenen, consultant, the Netherlands
Dr. Koen Venema, Beneficial Microbes Consultancy, the Netherlands

SUPPORTED BY
## PROGRAMME AT A GLANCE

### MONDAY 16 MARCH 2015

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>12:45 – 13:00</td>
<td>Conference opening</td>
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<tr>
<td>13:00 – 14:00</td>
<td>Keynote Lectures</td>
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| 14:00 – 15:45  | Plenary meeting
- Legislative and regulatory framework – ‘Tour-du-Monde’ |
| 16:15 – 18:00  | Parallel session 1
- Effect of pre- and probiotics on the immune system during early life |
|                | Parallel session 2
- How microbes affect brain development and behaviour                  |
| 18:00 – 19:30  | Sand sculpture party                                                  |

### TUESDAY 17 MARCH 2015

<table>
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<tr>
<th>Time</th>
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| 08:30 – 10:15  | Parallel session 3
- The role of beneficial microbes in delaying ageing                  |
|                | Parallel session 4
- Beneficial microbes also affect oral health                           |
| 10:45 – 12:30  | Parallel session 5
- Intestinal health – challenges in the transfer of experimental data into applications |
|                | Parallel session 6
- The growing importance of beneficial microbes in animal nutrition and health |
| 12:30 – 13:30  | Lunch break                                                           |
| 13:30 – 15:30  | Parallel session 7
- The battle against obesity – the role of beneficial microbes         |
|                | Parallel session 8
- The influence of gut microbiota on drug efficiency                    |
| 16:00 – 17:00  | Plenary meeting
- Speed presentations*                                                   |
| 17:00 – 18:00  | Poster viewing & drinks                                               |
| 20:00          | Conference dinner (reservations only)                                 |

* Short presentations by selected poster presenters

### WEDNESDAY 18 MARCH 2015

<table>
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<tr>
<th>Time</th>
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| 08:30 – 10:30  | Parallel session 9
- Novel applications of our old friends, beneficial microbes          |
|                | Parallel session 10
- International projects focused on beneficial microbes – research in progress |
| 11:00 – 12:15  | Plenary meeting
- Where do we go from here?                                            |
| 12:15 – 12:30  | Summary and conclusions
- Conference closing                                                      |
CONFERENCE PROGRAMME

12:45 Opening of the 4th Beneficial Microbes Conference
Dr. Koen Venema, Beneficial Microbes Consultancy, the Netherlands

KEYNOTE LECTURES

13:00 Archaeological dental calculus: a microbial, molecular Pompeii
Dr. Enrico Cappellini, Natural History Museum of Denmark, University of Copenhagen, Denmark

13:30 State of the art of gut microbiota research
Prof.dr. Michiel Kleerebezem, NIZO food research and Wageningen UR, the Netherlands

PLENARY MEETING

LEGISLATIVE AND REGULATORY FRAMEWORK – ‘TOUR-DU-MONDE’

Chair: Dr. David Keller, Ganeden Biotech, Inc., USA

14:00 A regulatory update on pre- and probiotics in the EU food chain (from farm to fork) – bugs in the system?
Dr. Elinor McCartney, Pen & Tec Consulting, Spain

14:20 Probiotics for functional foods and dietary supplements in the USA: regulatory hurdles
Dr. John Endres, AIBMR Life Sciences, Inc., USA

14:40 Pre- and prebiotics in South America: regulatory framework
Prof.dr. Célia Lucia de Luces Fortes Ferreira, Department of Food Technology, Federal University of Viçosa, Brazil

15:00 Evidentiary requirements for health claims in Australia and New Zealand
Dr. Dorothy Mackerras, Food Standards Australia New Zealand, Australia

15:20 Speaker to be confirmed

15:45 Networking break & poster viewing
**PARALLEL SESSION 1**  
**EFFECT OF PRE- AND PROBIOTICS ON THE IMMUNE SYSTEM DURING EARLY LIFE**

**Chair:** Dr. Marjolein Meijerink, Host-microbe Interactomics, Wageningen UR, the Netherlands

**16:15**  
**Microbial colonisation in early-life: impact on innate and adaptive immunity**  
Prof.dr. Kathy McCoy, Department of Clinical Research, University of Bern, Switzerland

**16:35**  
**Probiotics for allergy prevention**  
Dr. Christina West, Department of Clinical Sciences, Umeå University, Sweden

**16:55**  
**Early feeding and risk of type 1 diabetes**  
Prof.dr. Mikael Knip, Institute of Clinical Medicine, University of Helsinki, Finland

**17:15**  
**The influence of the milk glycome on the developing infant microbiota**  
Prof.dr. David A. Mills, Foods for Health Institute, University of California Davis, USA

**17:35**  
**Effects of pre- and probiotics in infant formula on the immune system early in life**  
Dr. Léon Knippels, Danone Research, the Netherlands

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**PARALLEL SESSION 2**  
**HOW MICROBES AFFECT BRAIN DEVELOPMENT AND BEHAVIOUR**

**Chair:** Dr. Maria Devant, Department of Ruminant Production, IRTA, Spain

**16:15**  
**The effects of prebiotics on neurobiology and behaviour: an exploration in rodents and humans**  
Dr. Phil Burnet, University Department of Psychiatry, Warneford Hospital, UK

**16:40**  
**Microbes, brain development and behaviour: more than a gut feeling**  
Prof.dr. John F. Cryan, Department of Anatomy and Neuroscience, University College Cork, Ireland

**17:05**  
**Can the gut microbiome influence brain function and behaviour in autism? From animal models to human populations**  
Dr. Derrick MacFabe, Departments of Psychology and Psychiatry, The University of Western Ontario, Canada

**17:30**  
**Gut microbiota – a key player involved in the developmental programming of the brain**  
Dr. Viorica Braniste, Department of Microbiology, Tumor and Cell Biology, Karolinska Institutet, Sweden
## PARALLEL SESSION 3
**THE ROLE OF BENEFICIAL MICROBES IN DELAYING AGEING**

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

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<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
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<tr>
<td>08:30</td>
<td><em>We are what we eat? The impact of diet, pre- and probiotic strategies on gut microbiota composition</em></td>
<td>Dr. Sylvia Duncan, <em>Rowett Institute of Nutrition and Health, University of Aberdeen, UK</em></td>
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<td>08:55</td>
<td><em>The gut microbiota as an emerging target to attain longevity and to combat age-related diseases</em></td>
<td>Prof.dr. Patrizia Brigidi, <em>Department of Pharmacy and Biotechnology, University of Bologna, Italy</em></td>
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<td>09:20</td>
<td><em>Ageing, longevity and -omics approaches for gut microbiota metabolism characterisation</em></td>
<td>Dr. Sebastiano Collino, <em>Nestlé Institute of Health Science, Switzerland</em></td>
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<td>09:45</td>
<td><em>Bacillus coagulans GBI-30, 6086 and its role in healthy ageing: a multifactorial approach</em></td>
<td>Edna Nyangale, <em>Department of Food and Nutritional Sciences, The University of Reading, UK</em></td>
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<tr>
<td>10:15</td>
<td>Networking break &amp; poster viewing</td>
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PARALLEL SESSION 5
INTESTINAL HEALTH – CHALLENGES IN THE TRANSFER OF EXPERIMENTAL DATA INTO APPLICATIONS

Chair: Prof.dr. J. Wells, Host-microbe Interactomics, Wageningen UR, the Netherlands

10:45 Host-microbe interaction in inflammatory diseases
Prof.dr. Julia-Stefanie Frick, Institut für Medizinische Mikrobiologie und Hygiene, Universitätsklinikum Tübingen, Germany

11:05 Faecalibacterium prausnitzii and inflammatory bowel disease
Dr. Harry Sokol, Service de Gastroentérologie et Nutrition, Hôpital Saint-Antoine, France

11:25 Lactobacillus rhamnosus GG: from clinical efficacy to understanding its mode of action
Dr. Sarah Lebeer, Department of Bioscience Engineering, University of Antwerp, Belgium

11:45 Faecal transplantation for inflammatory bowel disease
Dr. David Berry, Department of Microbiology and Ecosystem Science, University of Vienna, Austria

12:05 Microbiota-changing therapy, a viable option for the treatment of inflammatory bowel disease
Dr. David Berry, Department of Microbiology and Ecosystem Science, University of Vienna, Austria

12:30 Lunch break & poster viewing

PARALLEL SESSION 6
THE GROWING IMPORTANCE OF BENEFICIAL MICROBES IN ANIMAL NUTRITION AND HEALTH

Chair: Dr. Frédérique Chaucheyras-Durand, Lallemand, France

10:45 Next generation prebiotics and probiotics in animal production: what strategy to follow?
Prof.dr. Richard Ducatelle, Department of Pathology, Bacteriology and Poultry Diseases, Ghent University, Belgium

11:05 Probiotics in animal nutrition: gut health and beyond
Dr. Ajay Awati, Danisco Animal Nutrition, UK

11:25 Brain-gut axis communication: implications in animal welfare in beef
Dr. Maria Devant, Department of Ruminant Production, IRTA, Spain

11:45 Impact of a live yeast strain of Saccharomyces boulardii on gene expression in the colon of piglets around weaning
Dr. Melanie Le Bon, Division of Food Sciences, University of Nottingham, UK

12:05 In vitro lead selection as a basis for in vivo modulation of the gut microbiome
Dr. Jos van der Vossen, TNO, the Netherlands

12:30 Lunch break & poster viewing
PARALLEL SESSION 7
THE BATTLE AGAINST OBESITY – THE ROLE OF BENEFICIAL MICROBES

Chair: Dr. Max Nieuwdorp, Academic Medical Center, the Netherlands

13:30 Identification of a novel link between adipose tissue metabolism and gut microbiota: impact on the onset of obesity and metabolic disorders
Prof.dr. Patrice Cani, Louvain Drug Research Institute, Université catholique de Louvain, Belgium

13:55 Probiotics in prevention of weight gain and improvement of metabolic health
Dr. Sampo Lahtinen, DuPont, Finland

14:20 Experimental metabolic disorders: from functions to target bacteria
Dr. Thomas Clavel, ZIEL-Research Center for Nutrition and Food Sciences, Technische Universität München, Germany

14:45 Engineered probiotics for treatment of obesity
Dr. Sean Davies, Vanderbilt University, USA

15:10 Using faecal transplantation to mine for novel probiotics to fight insulin resistance
Dr. Max Nieuwdorp, Academic Medical Center, the Netherlands

15:30 Networking break & poster viewing

PARALLEL SESSION 8
THE INFLUENCE OF GUT MICROBIOTA ON DRUG EFFICIENCY

Chair: Dr. Gabriele Hörmannsperger, ZIEL- Research Center for Nutrition and Food Sciences, Technische Universität München, Germany

13:30 Host-microbe interactions in drug discovery
Dr. James R. Brown, GlaxoSmithKline, USA

13:55 The influence of probiotics on pharmacokinetics of a model drug
Dr. Eva Anzenbacherová, Department of Medical Chemistry and Biochemistry, Palacky University Olomouc, Czech Republic

14:20 Gut microbiota-cancer axis during CTLA4 blockade or cyclophosphamide
Dr. Laurence Zitvogel, Institut Gustave Roussy, France

14:45 Recombinant Lactococcus lactis: the designer medicine platform
Dr. Lothar Steidler, ActoGenix, Belgium

15:10 Engineering Escherichia coli adhesion to target cells and tumours for diagnostic and therapeutic applications
Dr. Luis Ángel Fernández, Department of Microbial Technology, CNB-CSIC, Spain

15:30 Networking break & poster viewing

PLENARY MEETING
SPEED PRESENTATIONS

Chair: Dr. Sarah Lebeer, Department of Bioscience Engineering, University of Antwerp, Belgium

16:00-17:00 Short presentations by selected poster presenters to provide an overview of their research and to inspire the audience to visit their posters.

17:00 – 18:00 Poster viewing & drinks
PARALLEL SESSION 9
NOVEL APPLICATIONS OF OUR OLD FRIENDS, BENEFICIAL MICROBES

Chair: Prof. dr. Eric Claassen, VU University Amsterdam and Erasmus MC, the Netherlands

08:30 Mining the gut microbiota: towards personalised prebiotics
Dr. Koen Venema, Beneficial Microbes Consultancy, the Netherlands

08:50 Multispecies probiotics combined with multispecies prebiotics – an innovative way of product development
Dr. Esther Prevo-Keijbets, Winclove, the Netherlands

09:10 Developing novel probiotic approaches to detoxification of environmental pollutants
Jordan Bisanz, Department of Microbiology and Immunology, The University of Western Ontario, Canada

09:30 Improving iron absorption by consumption of probiotics
Dr. Gunilla Önning, Probi AB, Sweden

09:50 Probiotics in space: new frontiers for man and microbe
Dr. Hermie Harmsen, Department of Medical Microbiology, University Medical Centre Groningen, the Netherlands

10:10 Novel lactic acid bacteria from honeybees as alternative tools in wound management
Dr. Alejandra Vasquez and Dr. Tobias Olofsson, Medical Microbiology, Lund University, Sweden

10:30 Networking break & poster viewing

PARALLEL SESSION 10
INTERNATIONAL PROJECTS FOCUSED ON BENEFICIAL MICROBES - RESEARCH IN PROGRESS

Chairs: Prof. dr. Lubbert Dijkhuizen, Groningen Biomolecular Sciences and Biotechnology Institute, University of Groningen, the Netherlands
Dr. Jurriaan Mes, Food & Biobased Research, Wageningen UR, the Netherlands

08:30 The CarboHealth Consortium: Structure/function relationships of carbohydrates as substrates for probiotic bacteria
Prof. dr. Lubbert Dijkhuizen, Groningen Biomolecular Sciences and Biotechnology Institute, University of Groningen, the Netherlands

08:50 The GENOBOX Consortium: Building a GENOmics toolBOX for the prediction of probiotic functionalities
Dr. Wynand Alkema, NIZO food research and Center for Molecular and Biomolecular Informatics, Radboud University Nijmegen Medical Centre, the Netherlands

09:10 The FibBiotics Consortium: Research strategies to analyse effects of fibres on the microbiota
Dr. Jurriaan Mes, Food & Biobased Research, Wageningen UR, the Netherlands

09:30 Lignofood: How Cannabis sativa can result in emerging prebiotics
Dr. Nuria Mateo, Isanatur, Spain

09:50 MyNewGut: Deciphering the role of gut microbes in nutrient metabolism and host health
Dr. Alfonso Benítez-Páez, Department of Food Science, IATA-CSIC, Spain

10:10 Asian Microbiome Project: Diversity in gut microbiota of Asian people
Dr. Jiro Nakayama, Department Bioscience and Biotechnology, Kyushu University, Japan

10:30 Networking break & poster viewing
PLENARY MEETING
WHERE DO WE GO FROM HERE?

Chair: Dr. Koen Venema, Beneficial Microbes Consultancy, the Netherlands

11.00 Role of phages in preserving diversity of prokaryotic populations
Prof.dr. Francisco Rodriguez-Valera, Evolutionary Genomics Group, Universidad Miguel Hernandez, Spain

11.25 Research priorities and innovative barriers in the probiotic industry
Prof.dr. Eric Claassen, VU University Amsterdam and Erasmus MC, the Netherlands

11:50 Technological advances in a new golden age for microbiology, and future prospects for therapeutic intervention
Dr. Alan Walker, Rowett Institute of Nutrition and Health, University of Aberdeen, UK

12:15 Summary and conclusions

12.30 Closing of the 4th Beneficial Microbes Conference
CALL FOR POSTER ABSTRACTS

The Advisory Committee of the 4th Beneficial Microbes Conference issues a call for poster abstracts. Particularly students are encouraged to submit abstracts.

SUBMISSION DEADLINE
1 February 2015

NOTIFICATION OF ACCEPTANCE
Not later than 15 February 2015

SPEED PRESENTATIONS
A number of abstracts will be selected for 5-minute talks (‘speed presentations’) on Tuesday 17 March 2015.

TOPICS
Conference topics include pre- and probiotics and:
• the immune system
• brain development and behaviour
• ageing and longevity
• oral health
• intestinal health
• animal nutrition and health
• obesity
• drug efficiency
• regulatory requirements

RULES FOR SUBMISSION
• Abstracts must be sent by email to: BM@bastiaanse-communication.com
• Abstracts must be submitted in English and shall not exceed 400 words.
• Abstracts will be accepted in Microsoft Word only.
• The Advisory Committee will determine whether the abstract will be accepted.
• Submission of an abstract acknowledges the author’s acceptance for the abstract to be published in the book of abstracts.
• Presenting authors of abstracts must be registered and paid participants.
• Posters will be displayed throughout the conference.
• Poster size: A0 portrait (841 mm x 1189 mm).
WEBSITE
The latest details of the 4th Beneficial Microbes Conference can be found at the conference website: www.bastiaanse-communication.com/bm2015

VENUE
The conference takes place on 16-18 March 2015 at the NH Atlantic hotel, The Hague, the Netherlands. Nestled in the expansive rural dunes, NH Atlantic provides guests with a unique blend of coastal charm and luxury. NH Atlantic is just 20 minutes away from the centre of The Hague. Participants can easily include a visit to Museon, Panorama Mesdag, Madurodam, and the Peace Palace to their agendas.

WHO SHOULD ATTEND?
The conference topics are intended to meet the needs of researchers, food, feed and healthcare professionals who want to be updated on the advances in pre- and probiotics research. Interested attendees include basic and translational research scientists, nutritionists, dietitians, physicians, students, policy makers, and key opinion leaders with an interest in pre- and probiotics.

HOW TO REGISTER AND BOOK A ROOM?
For all relevant information on registration fees, on-line registration and hotel accommodation, please go to the conference’s website: www.bastiaanse-communication.com/bm2015

BUSINESS OPPORTUNITIES
The 4th Beneficial Microbes Conference offers various business opportunities, including:

- Sponsoring of the conference
  Benefit from excellent name recognition by sponsoring the conference. Sponsoring opportunities covering lunch, evening functions and conference programme material also exist.

- Exhibiting at the conference
  Gain valuable direct exposure! Parallel to the conference a commercial exhibition presenting products and services related to pre- and probiotics will be organised.

More information on the business opportunities can be found at the conference’s website: www.bastiaanse-communication.com/bm2015

LANGUAGE
English will be the official conference language.

It may be necessary for reasons beyond the control of the organisers to alter the content and timing of the programme or the identity of the speakers.

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