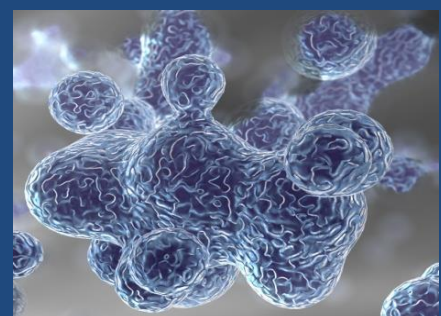




4th Microbiome R&D and Business Collaboration Congress: USA

**COLLABORATIONS IN MICROBIOTA RESEARCH, LIVE
BACTERIAL THERAPEUTICS, HUMAN HEALTH & DISEASE**

Probiotics Congress: USA

**RESEARCH, DEVELOPMENT &
APPLICATION OF PROBIOTICS AND
PREBIOTICS IN HUMAN AND ANIMAL
HEALTH**

As part of its international microbiome series, Global Engage is pleased to announce the co-located **4th Microbiome R&D and Business Collaboration Forum: USA** and **Probiotics Congress: USA** which will be held on 3-4 October 2016 at the **San Diego Marriott La Jolla**.

Recent research has demonstrated the importance of our microbes in our maintaining health and their possible use in treating and preventing disease. As microbial dysbiosis has been shown to be linked to several long-term diseases; approaches that modify our microbiome by adding or removing individual microbes or entire microbial communities have been shown to have a significant impact on the health of an individual. This excitement has been typified by the launch, at the White House, of the National Microbiome Initiative. The potential to use the microbiome as a therapy and to design treatments customised to the patient's microbiome has created a rapidly growing interest from the pharmaceutical industry and investors and it looks set to continue to grow in the coming years with the emerging microbiome market expected to reach US\$658 million by 2023. There is a rich source of information, backing and partnering opportunities for researchers and companies looking for opportunities in this field as well as the burgeoning probiotic space.

Attracting over 250 attendees, the 9th meeting in the global series will build upon the success of last year's meeting which attracted over 200 attendees as well as our highly popular European and Asia forums to explore the interface between our evolving cultures, technologies and our microbiome through a series of interactive presentations with leading academics and industry experts, panel discussions and an exhibition area allowing solution providers to showcase their products and services. The Global Engage series is rapidly gaining a fantastic reputation for fostering partnerships across academia, pharma and biotech. If looking to either learn more from the top scientists in the microbiome and probiotic space; showcase exciting developments in your research; or seek partnerships and funding within the industry; it is a congress not to be missed.

Conference Synopsis

Gut Microbiota in Health and Disease

- Connections to IBD and IBS & Gut microbiota transplantation
- Innate immune system and host-pathogen Interaction
- Associations of obesity and metabolic disease
- Microbiomes to Medicines
- Industry-academic research platforms
- Role of synthetic biology
- Sequencing and bioinformatics of the human microbiome
- Research into the microbiome and HIV
- Microbiome in cancer
- Case studies: industry success stories and establishment of microbiome centers

Skin Microbiota

- Diversity of skin communities
- Panel: Developing skin microbiota-mediated therapeutic approaches
- Mechanisms of Tolerance
- Fungal Microbiome in Skin Health
- Probiotic approaches to treat skin disorders
- Skin and scalp microbiomes
- Case studies and therapeutic potential in acne, eczema, atopic dermatitis, and microbiomes of chronic and acute wounds

R&D Outside the Gut

- Lung microbiota – COPD, HIV, and airway diseases
- New therapeutic possibilities for lung disease
- Microbiome of the female urogenital tract and pregnancy
- Gut-brain axis
- Oral microbiome therapeutics

Commercialisation of the Microbiome

- Panel discussion: Venture capital and microbiome investment
- Panel discussion: Pharma and the microbiome
- Crowd funding and other fundraising options
- What makes commercial sense from both the pharma and patient perspective?
- Necessary QC and regulatory approaches
- Securing investment (extended networking sessions outside the congress program)
- Development, application & acquisition of technology platforms within the microbiome space
- Beyond the noise – opportunities and overhype
- Contemplating novel antibiotic therapies that do not destroy the healthy microbiome
- Bringing live microbial products to market – IP, regulation, GMP

Probiotics Congress

- Probiotics and digestive health
- Prebiotics and functional foods
- Probiotics in pediatrics
- Role of human milk oligosaccharides
- Regulation and product development
- Strain identification, designation and safety
- Probiotics and prebiotics for animal health
- Pro- and prebiotics and dietary interactions
- Panel: QA and verification of dietary supplement products

Confirmed Speakers and Chairs



Rob Knight
Professor of Pediatrics and
Computer Science & Engineering,
University of California, San Diego



Mark Morrison
Professor & Chair, Microbial Biology &
Metagenomics, University of
Queensland Diamantina Institute,
Australia



Elizabeth Hohmann
Associate Professor of Medicine,
Massachusetts General Hospital



Tiffany Scharschmidt
Assistant Professor of Dermatology,
University of California, San Francisco



Clotilde Teiling
Sr. Marketing Programs Manager,
Microbial Genomics and Infectious
Disease, Illumina Inc.



Avi Spier
Director, Strategic Alliances, Novartis
Institutes for Biomedical Research,
Novartis



David Nicholson
Executive Vice President, Brands
R&D, Allergan



Craig Murphy
Senior Director of Immunology &
Therapeutic Innovation, Ferring
Pharmaceuticals



Wenyan Shi
Professor and Chair of Oral Biology,
UCLA Schools of Medicine and
Dentistry



Beth McCormick
Professor & Executive Director,
Center for Microbiome Research,
University of Massachusetts



Inga Peter
Associate Professor, Department of
Genetics and Genomic Sciences,
Icahn School of Medicine at Mount
Sinai



Bernat Olle
Co-founder & Chief Operating
Officer, Vedanta Biosciences, Inc. /
Vice President, PureTech



Richard Gallo
Professor and Interim Chair,
Department of Dermatology,
University of California, San Diego



Ma Somsouk
Associate Professor of Medicine,
Division of Gastroenterology, Universi
of California, San Francisco



Chase Beisel
Assistant Professor, Department of
Chemical & Biomolecular
Engineering, North Carolina State
University



Dirk Gevers
Global Head, Janssen Human
Microbiome Institute, Janssen
Research & Development



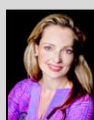
Arpita Maili
Director, External R&D Innovation,
Inflammation and Immunology, Pfizer



Dana Hosseini
CEO and Co-Founder, ProdermIQ



Marc Güell
Chief Scientific Officer,
S-Biomedic



Eva Berkes
Co-Founder & Chief Scientific Officer
Quorum Innovations



Leopoldo Segal
Assistant Professor, Department of
Medicine, New York University
School of Medicine



Thomas L. Dawson, Jr.
Senior Principal Investigator,
Agency for Science, Technology,
and Research (A*STAR), Institute of
Medical Biology (IMB), Singapore



Harro Timmerman
Principal Scientist Microbiota in
Health & Disease, NIZO Food
Research BV, The Netherlands



Robert Osgood
Associate Professor of Microbiology,
Rochester Institute of Technology



Ying-Chieh Tsai
Professor, National Yang Ming
University, Taiwan



Michael Step
Chief Executive Officer,
Ritter Pharmaceuticals



Jane Foster
Associate Professor, Department of
Psychiatry & Behavioural
Neurosciences, McMaster University,
Canada



Alison Morris
Professor of Medicine and
Immunology, University of Pittsburgh



Maxence Desjonquères
Chief Executive Officer,
Biose



Lada Rasochova
Chief Executive Officer,
Dermala Inc.



John Zibert
Chief Medical Officer, Medical
Director, LEO Innovation Lab,
Denmark



Ming Wang
Vice President, Diabetes Disease
Area Leader, Janssen
[SESSION CHAIR]



Nick Conley
Chief Executive Officer,
EpiBiome



Lisa Gamwell
Microbiome Product Manager, DNA
Genotek



Işıl Tüzün Weber
Process Engineer Technical
Operations Manufacturing, SynCo
Bio Partners



Pierre Belichard
CEO, Enterome

Confirmed Speakers and Chairs continued...



Sean Davies
Associate Professor of
Pharmacology, Vanderbilt
University



David Kyle
CEO, Evolve Biosystems



Elsbeth Pekelharing
Science Liaison, Winlove
Probiotics



Mohan Iyer
Chief Business Officer, Second
Genome
[SESSION CHAIR]



Isaac Bright
Vice President, Corporate
Development, Synthetic Biologics, Inc



Malcolm Kendall
Co-Founder & CEO, Microbiome
Insights, Inc.



Gregory J. Kuehn
President and COO, Metabiomics



Lindsay Peed
Lead Scientist Life Sciences,
Microbiology, Kimberly-Clark



Eric de la Fortelle
Venture Partner, Seventure Partners



Chandra Ghose
Former CSO, Symbiotic Health



Larry Weiss
Chief Medical Officer, AOBiome



Maria Marco
Associate Professor, University of
California, Davis



Senior Representative
Second Genome



Lars Bode
Associate Professor, University of
California, San Diego



Anurag Pande
Vice President, Scientific Affairs,
Sabinsa Corporation



Duncan Peyton
CEO, 4D pharma plc.



Anders D. Andersen
Senior Scientific Advisor, LEO
Innovation Lab, Denmark



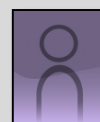
Pradeep Dudeja
Professor of Physiology, Division of
Gastroenterology & Hepatology,
University of Illinois, Chicago, USA
[SESSION CHAIR]



Lynne V. McFarland
Research Scientist, VA Puget Sound
Healthcare System/ Affiliate
Associate Professor, U. Washington



Bruno Pot
President, Pharmabiotic Research
Institute & Research Director,
Laboratory of Lactic Acid Bacteria &
Mucosal Immunity, Institute Pasteur, L



Buffy Stahl
Genomics and Microbiome Science
Leader, DuPont Nutrition & Health



Jens Noesgaard Jørgensen
Global Product Manager, Swine
Probiotics, Chr. Hansen Animal
Health



Julie McKinney
Senior Manager, Global R&D, Pfizer
Consumer Healthcare



Berenice Ocampo Guevara
Associate Director, Global
Regulatory and Nutrition Science,
Mead Johnson Nutrition



Louise Vignæs
Preclinical Development Manager,
Glycom A/S, Denmark



Jiangchao Zhao
Assistant Professor, University of
Arkansas



Kevin Davy
Professor
Virginia Tech



Johan van Hylckama Vlieg
Vice President Microbiome &
Human Health Innovation, Chr.
Hansen A/S, Denmark
[RESERVED]



Marion Leclerc
Team Leader, MICALIS, INRA,
France



Michael Gänzle
Professor, Department of
Agricultural, Food & Nutritional
Science, University of Alberta,
Canada



Moul Dey
Associate Professor, South Dakota
State University
[SESSION CHAIR]



Susan Cho
President, Nutrasource, Inc



Ravi Kumar
Scientist II, Novozymes Inc



Julian Trachsel
PhD Student, USDA-ARS



Peter Chi Keung Cheung
Professor, Food and Nutritional
Sciences Program, School of Life
Sciences & Director, Chinese
University of Hong Kong



Jan Suchodolski
Professor, Department of Small
Animal Clinical Sciences, Texas
A&M University



Keith Garleb
Director R&D Programs, Abbott
Nutrition R&D

Platinum Sponsors



Gold Sponsors



Silver Sponsors



Sponsors



Agenda: Day One – Thursday, 3 October 2016

08.00-08.50		Registration & Coffee	
08.50-09.00	Global Engage Welcome Address & Morning Chair's Opening Remarks Stream Chair: Mohan Iyer, Chief Business Officer, Second Genome	Global Engage Welcome Address & Morning Chair's Opening Remarks Stream Chair: Pradeep Dudeja, Professor of Physiology, Division of Gastroenterology & Hepatology, University of Illinois, Chicago	
09.00-09.35	Keynote Address: Is There a Culture Gap in Translating Microbiomes to Medicine? Over the last decade, research of the "human microbiome" has gained prominence in terms of the scale of investment, professional and media reportage, and social interest in its findings. Its emergence as a distinct field of research has been both a cause, and a consequence of the rapid advances in DNA/RNA sequencing technologies and computational methods of data analysis. Importantly, these approaches have expanded our understanding of the relevance of the human microbiota beyond the realms of pathogenesis and infectious disease to include an appreciation of the role for "commensal" microbes to a person's "wellness"; as well as the host's susceptibility, resilience and relapse to both chronic and acute diseases. However, and despite the advances via microbiome research, much remains obscure in terms of defining when variations in the microbiota are the cause, or a consequence of host phenotype, which constrains the translation of this phenomenology into social impact. This presentation will summarise some of our efforts to extend human microbiome research beyond its genomics roots, to take advantage of other principles inherent to environmental microbiology. CONFIRMED: Mark Morrison, Professor & Chair, Microbial Biology and Metagenomics, University of Queensland Diamantina Institute, Australia	Keynote Address: Title To Be Confirmed Strain Identification, designation and safety for <i>Lactobacillus</i>, <i>Bifidobacterium</i> and related organisms CONFIRMED: Bruno Pot, President, Pharmabiotic Research Institute & Research Director, Laboratory of Lactic Acid Bacteria & Mucosal Immunity, Institute Pasteur, Lille	
09.35-10.05	The Center for Translational Microbiome Research (CTMR): An Open Academic Research Collaboration between Ferring Pharmaceuticals and the Karolinska Institute Our overriding goal is to better understand the contribution of the human microbiome to the physiology and pathophysiology of disease, thereby opening opportunities for development of novel therapies to improve people's lives. We go into the space with the view that it is important to sort out the hope from the hype. It is our view that the only way to achieve this is to know what is 'normal'. Currently there exist many small pilot studies with poor epidemiological design and observations reported need to be confirmed in larger well-designed (and preferably) population-based studies with long follow-up periods Our initial efforts include the Karolinska's prospective population-based studies in the gastroenterology field; however, we are planning studies in reproductive health and women's health areas. CONFIRMED: Craig Murphy, Senior Director of Immunology & Therapeutic Innovation, Ferring Pharmaceuticals	Title To Be Confirmed RESERVED: Johan van Hylckama Vlieg, Vice President Microbiome & Human Health Innovation, Chr. Hansen A/S, Denmark	
10.05-10.35	Sponsored Presentation: Title To Be Confirmed CONFIRMED: Pierre Belichard, CEO, Enterome Bioscience	Solution Provider Presentation For sponsorship opportunities please contact Gavin Hambrook at gavin@globalengage.co.uk	
10.35-11.45		Morning Refreshments Poster Presentation Sessions & Scheduled One-to-One Meetings	

Gut Microbiota in Health and Disease Session Chair: Avi Spier, Director, Strategic Alliances, Novartis Institutes for Biomedical Research, Novartis		Skin Microbiota Session Chair: Lada Rasochova, CEO, Dermala Inc.	Probiotics Congress Stream Chair: Pradeep Dudeja, Professor of Physiology, Division of Gastroenterology & Hepatology, University of Illinois, Chicago
11.45-12.10	Frozen, Encapsulated Fecal Microbiota Transplant for <i>C. difficile</i> Infection Fecal Microbiota Transplantation (FMT) is an accepted treatment for recurrent <i>C. difficile</i> infection (CDI). We have prospectively followed 200 patients treated with FMT capsules at Massachusetts General Hospital. Patients 7-95 years of age, with 3 or more mild-to-moderate episodes of CDI, or 2 episodes requiring hospitalization, were treated with open label capsule FMT (15 capsules on each of 2 successive days). Cure (defined as resolution of diarrhea, or no recurrence of diarrhea within 8 weeks) was achieved in 82% with a single dose of 30 capsules, rising to 92% with a second dose in those who relapsed based upon worsening symptoms and fecal testing. Adverse events were minor, with the exception of two patients diagnosed by biopsy with ulcerative colitis (UC) in the follow-up period. In one subject UC was clinically suspected before FMT, in the other not. FMT by capsule is offered as standard care for CDI at our institution. CONFIRMED: Elizabeth Hohmann, Associate Professor of Medicine, Massachusetts General Hospital	Identification and Therapeutic Application of Rationally Selected, Novel Components of the Human Skin Microbiome The skin protects us from microbial invasion and is essential for development of a normal immune system. Antimicrobial peptides (AMPs) are necessary for epithelial function and participate in the pathogenesis of common human diseases such as atopic dermatitis. To test if the microbiome contributes to the function of human skin we developed a high-throughput screening system for AMP function from human skin bacteria. A library of strains was assembled, and several previously unknown bacterial products were identified with potent antimicrobial activity. Subsequent animal and human clinical trials have confirmed that these molecules are safe and act on the skin to inhibit <i>S. aureus</i> colonization while maintaining the normal flora. This rational microbiome functional profiling approach has defined specific molecules enabling bacteriotherapy of human disease. CONFIRMED: Richard Gallo, Professor and Interim Chair, Department of Dermatology, University of California, San Diego	Probiotics for the Prevention of Pediatric and Adult AAD: Making the Right Choice A total of 26 RCTs for pediatric AAD and 44 RCTs for adult AAD were included. The pooled RR for pediatric and adult AAD indicated probiotics, in general, were significantly effective, but due to strain-specific efficacy sub-group analyses were required. Of the 17 different types of probiotics tested in children, only three were significantly effective and 14 lacked confirmatory RCTs. For the 23 different types of probiotics tested in adults, 6 were significantly effective, while 4 types were not effective and 13 lacked confirmatory RCTs. CONFIRMED: Lynne V. McFarland, Research Scientist, VA Puget Sound Healthcare System/ Affiliate Associate Professor, U. Washington
12.10-12.35	Delivery of Programmable Nucleases for Rationally Altering Microbial Communities The human microbiome comprises thousands of bacterial strains and species, where we still know little how individual members contribute to community function and human health. In this talk, I will highlight my research group's ongoing work on developing targeted programmable antimicrobials to remove individual members of a microbial community. These antimicrobials are based on CRISPR-Cas systems immune systems that have gained widespread attention for genome editing but also hold potential as next-generation antimicrobials. I will discuss our efforts to develop generalized delivery vehicles that rely on engineered bacteriophages and how these vehicles can be exploited to deliver CRISPR antimicrobials to multiple species. By removing individual members of a microbial community, we seek to evaluate the specific role of that member in microbiome function and begin rationally altering the composition of the human microbiome in order to improve human health. CONFIRMED: Chase Beisel, Assistant Professor, Department of Chemical & Biomolecular Engineering, North Carolina State University	Elucidating Mechanisms of Tolerance to Commensal Skin Microbes Our skin contains billions of lymphocytes that protect us from infection by recognizing and responding to microbial antigens. Yet, healthy skin shows no evidence of destructive inflammation directed against commensal bacteria. Using an in vivo model to study the commensal-specific CD4 ⁺ T cell response, we recently observed that immune tolerance to skin commensals is preferentially established early in life and mediated by a unique population of regulatory T cells in neonatal skin. In fact, commensals themselves help facilitate immune tolerance by augmenting accumulation of these Tregs. Further efforts to dissect the cellular and molecular mechanisms that mediate adaptive immune tolerance to skin commensals may open new therapeutic opportunities for inflammatory skin disease. CONFIRMED: Tiffany Scharschmidt, Assistant Professor of Dermatology, University of California, San Francisco	Use of probiotic <i>Lactobacillus reuteri</i> for control of enterotoxigenic <i>Escherichia coli</i> Enterotoxigenic <i>Escherichia coli</i> cause diarrhea in infants, piglets, and calves. Probiotic <i>Lactobacillus reuteri</i> provided as freeze dried preparation, or ingested as part of fermented food or feed reduces intestinal colonization by ETEC and thus may prevent diarrhea or reduce the severity of the disease. Specific metabolic traits of <i>L. reuteri</i> , particularly the formation of reutericyclin or exopolysaccharides, specifically contribute to probiotic properties of this organism. CONFIRMED: Michael Gänzle, Professor, Department of Agricultural, Food & Nutritional Science, University of Alberta, Canada
12.35-13.00	Reconstituting the Gut Microbiome: Lessons from HIV Infection - Dysbiosis is frequent in the setting of HIV, and like <i>C. difficile</i>, can be stably altered - Dysbiosis in the setting of HIV is associated with systemic markers of inflammation - Interventions to reconstitute the microbiome during HIV will inform other disease conditions CONFIRMED: Ma Somsouk, Associate Professor of Medicine, Division of Gastroenterology, University of California, San Francisco	Microbiome: Cause or Consequence of Inflammatory Skin Diseases? The skin and gut microbiome in patients with chronic skin diseases such as psoriasis and atopic dermatitis (eczema) is affected by the diseases. If the change in diversity is a cause or consequence of the diseases is an open question. The talk will include preliminary data on the microbiome in patients with psoriasis obtained on the skin, gut and mouth, and relating to in particular the bacteria <i>Coprococcus</i> species, <i>Akkermansia</i> , <i>Ruminococcus</i> , and <i>Pseudobutyrvibrio</i> previously found in the gut flora in patients with psoriasis. For atopic dermatitis the potential in introducing microbes that control <i>staphylococcus aureus</i> predominance or a general reduction of skin microbes, which may be followed by a prompt recolonization with a community of broader diversity will be discussed. CONFIRMED: John Zibert, Chief Medical Officer, Medical Director, LEO Innovation Lab, Denmark	Title To Be Confirmed New Probiotics to Prevent Relapse in Crohn's Disease? We have been analyzing crohn's disease patients before, rugin and one year after surgery, and by using a new network analysis of the sequences, have found a set of species that could be a potential new probiotic mix in adult after surgery. Key point: 6 months after surgery, individuals harboring this set of species within their control biopsies will be in remission at 12 months. The other one will be in relapse. We can predict the outcome of the surgery and modify patient care. We are getting these strains in culture to test their potency in animal models. Test of this set of species on the patients would be our next step. CONFIRMED: Marion Leclerc, Team Leader, MICALIS, INRA, France

13.00-13.15	Company Showcase: Microbiome Diagnostics Platform for Microbiome Health and Colon Cancer Prevention - Metabionics MB-01 Colorectal Adenoma Microbiome Clinical Research Study, Breakthrough Protocols and Predictive Modeling Workflow - Metabionics MB-01 MultiTag NGS 16S rRNA Sequencing Technology - Metabionics Microbiome Diagnostics Platform and Pipeline  CONFIRMED: Gregory J. Kuehn, President and COO, Metabionics	Company Showcase For sponsorship opportunities please contact Gavin Hambrook at gavin@globalengage.co.uk	Company Showcase For sponsorship opportunities please contact Gavin Hambrook at gavin@globalengage.co.uk
13.15-14.15	Lunch		
	Session Chair: Ming Wang, Vice President, Diabetes Disease Area Leader, Janssen	Session Chair: Lada Rasochova, CEO, Dermala Inc.	Session Chair:
14.15-14.45	Sponsored Presentation: Title To Be Confirmed  SECOND GENOME THE MICROBIOME COMPANY CONFIRMED: Senior Representative, Second Genome	A Forbidden Kingdom: The Fungal Microbiome in Skin Health. Why it's Important, What Needs To Be Done, and How to Intervene In the scope of human microbiome research, there remain two related and unexploited areas, skin and fungi. As an example of the importance and opportunity in leveraging the skin mycobiome, this presentation will review current understanding of healthy versus diseased scalp, the scalp Mycobiome, the role of Malassezia in dandruff and seborrheic dermatitis, the state of the art in Malassezia genomics, and how current treatment options influence the scalp Mycobiome. We identified candidate organisms, defined pathogenic mechanisms, and designed successful treatment interventions for the consumer market. These strategies may also be broadly applied across skin health. CONFIRMED: Thomas L. Dawson, Jr., Senior Principal Investigator, Agency for Science, Technology, and Research (A*STAR), Institute of Medical Biology (IMB), Singapore	Therapeutic Modulation of the Gut Microbiota and Cardiometabolic Health - The gut microbiota has been implicated in obesity and its cardiometabolic sequelae. - High fat diets result in a shift in gut microbial communities that resembles that observed in obesity - The present talk will provide an overview of studies addressing whether probiotics modify the cardiometabolic consequences of high fat diets and obesity CONFIRMED: Kevin Davy, Professor, Virginia Tech
14.45-15.15	How NGS is revolutionizing Microbiology  CONFIRMED: Clotilde Teiling, Sr. Marketing Programs Manager, Microbial Genomics and Infectious Disease, Illumina Inc.	Panel Discussion: Skin Microbiota Therapeutics - Landscape of the skin microbiome - Skin microbiota and probiotics - Establishing skin microbiome biotech and treatments CONFIRMED: Dana Hosseini, Chief Executive Officer & Co-Founder, ProdermiQ Marc Güell, Chief Scientific Officer, S-Biomedic Eva Berkes, Co-Founder & Chief Scientific Officer, Quorum Innovations Lada Rasochova, CEO, Dermala Inc.	Probiotics and Psoriasis - an Inflammatory Skin Condition. What's the Potential? - The gut microbiota is important for host health, and gut bacterial dysbioses are associated with gastrointestinal inflammatory conditions in both pediatric and adult populations. - Through immunomodulatory actions, certain probiotic strains are thought to be able to influence both the mucosal and the systemic immunity, which may extend also to inflammatory conditions in the skin. - Psoriasis is a chronic skin inflammatory condition that affects approximately 2% of the population. Some of these are further burdened by gut-related comorbidities, such as inflammatory bowel diseases. Some research suggest that certain immune mediators are involved in both the skin manifestations and in the mucosal inflammation, which highlights a therapeutic potential for gut targeted interventions that may be helpful for psoriasis patients. CONFIRMED: Anders D. Andersen, Senior Scientific Advisor, LEO Innovation Lab, Denmark

15.15-15.40	Targeting the Microbiome to Promote Health Through advances in science, we have a better understanding of the role the microbiome plays in wellness and disease. We have learned that balance and imbalance in the microbiota can be assessed and linked to diseases with unmet patient needs, like cancer, inflammatory bowel disease and diabetes. The Janssen Human Microbiome Institute, created in 2015, is committed to finding new solutions or interventions targeting the microbiome that can promote health. By building their internal expertise and developing an open innovation approach they aim to work with scientific and entrepreneurial collaborators around the world across academia, government and the life science industry who share their passion. CONFIRMED: Dirk Gevers, Global Head, Janssen Human Microbiome Institute, Janssen Research & Development	Title To Be Confirmed CONFIRMED: Larry Weiss, Chief Medical Officer, AOBiome	Novel Analytical Techniques for Viability and Functionality Assessment, throughout the Product Lifecycle - Current state of probiotic screening and the need for improved techniques - Relevant assessment of ingredients and products throughout the product lifecycle - Novel analytical techniques including Mass Spectrophotometry (DART, GC-MS) and Flow Cytometry CONFIRMED: Julie McKinney, Senior Manager, Global R&D, Pfizer Consumer Healthcare
15.40-16.30	Afternoon Refreshments Poster Presentations & Networking Meetings		
16.30-17.30	Panel Discussion: Development of Microbiome Therapeutics CONFIRMED: Avi Spier, Director, Strategic Alliances, Novartis Institutes for BioMedical Research David Nicholson, Executive Vice President Brands R&D, Allergan Arpita Maiti, Director, External R&D Innovation, Inflammation and Immunology, Pfizer RESERVED: Senior Representative, Johnson & Johnson Senior Representative, Genentech		Panel Discussion: Quality Assurance and Verification of Content of Dietary Supplement Probiotics - Barriers for third-party verification - Strain designation, genus of species and efficacy - Quality assurance and scientific substantiation CONFIRMED: Chair: Susan Cho, President, Nutrasource, Inc. Invite to: Senior Representatives x3
17.30-17.45	Company Showcase: Human Microbiota: Proof of Concept to Production - General overview of live microbial production processes - Step by step process description with emphasis on process development - Considerations prior/during tech transfer focusing on specific requirements for pharma (GMP) production CONFIRMED: Işıl Tüzün Weber, Process Engineer Technical Operations Manufacturing, SynCo Bio Partners		Company Showcase For sponsorship opportunities please contact Gavin Hambrook at gavin@globalengage.co.uk
17.45-18.00	Company Showcase: Title To Be Confirmed CONFIRMED: Lisa Gamwell, Microbiome Product Manager, DNA Genotek		Company Showcase For sponsorship opportunities please contact Gavin Hambrook at gavin@globalengage.co.uk
18.00-18.15	Company Showcase For sponsorship opportunities please contact Gavin Hambrook at gavin@globalengage.co.uk		Company Showcase For sponsorship opportunities please contact Gavin Hambrook at gavin@globalengage.co.uk
18.15	Chairman's Closing Remarks & End of Day One		
18.15-19.15	Drinks Reception If you would like to sponsor the drink's reception please contact Gavin Hambrook at gavin@globalengage.co.uk		

Agenda: Day Two – Friday, 4 October 2016

08.00-08.40		Networking Meetings and Coffee	
08.40-08.45		Microbiome Congress	
Stream Chair:		Stream Chair Moul Dey, Associate Professor, South Dakota State University	
08.45-09.20		Keynote Address: Interplay between Diet and Intestinal <i>Lactobacillus</i> Host diet has a significant influence on the composition of the indigenous intestinal microbiota. Less understood is the importance of diet on probiotic performance. Our pre-clinical studies have shown that foods high in refined sugar and fat result in significant reductions to indigenous <i>Lactobacillus</i> species populations yet promote the survival and efficacy of ingested, probiotic <i>Lactobacillus</i> in a compensatory manner, providing evidence that probiotics have pivotal roles in the maintenance and restoration of the intestinal ecosystem when obesogenic diets are consumed. This distinction is also supported by the capacity of probiotic <i>Lactobacillus</i> to prevent excessive weight gain and glucose intolerance.	
CONFIRMED: Rob Knight, Professor of Pediatrics and Computer Science & Engineering, University of California, San Diego		CONFIRMED: Maria Marco, Associate Professor, University of California, Davis	
09.20-09.45		Pre- and Probiotics in Infant Nutrition, Regulatory and Scientific Framework: An Industry Perspective	
Sponsored Presentation: Title To Be Confirmed		CONFIRMED: Berenice Ocampo Guevara, Associate Director, Global Regulatory and Nutrition Science, Mead Johnson Nutrition	
CONFIRMED: Duncan Peyton, CEO, 4D pharma plc.			
09.45-10.15		Title To Be Confirmed	
Sponsored Presentation: Pioneering Development in the Gut Microbiome • Overview of RP-G28's lactose intolerance indication development • Phase 2a microbiome data trends • Phase 2b/3 clinical trial status update		CONFIRMED: Buffy Stahl, Genomics and Microbiome Science Leader, DuPont Nutrition & Health	
CONFIRMED: Michael Step, Chief Executive Officer, Ritter Pharmaceuticals			
10.15-10.45		Sponsored Presentation: Only the Fittest Survive: Heat Stable LactoSpore Probiotic • Learn how this shelf-stable probiotic, MTCC 5856, survives in high heat and can remain active even at room temperatures • Discover the possibilities of this probiotic in applications ranging from supplements to food categories, such as capsules, tablets, to bread and muffins • Come see the multitude of studies, ranging from IBS to MDD, that MTCC 5856 had an impact on	
CONFIRMED: David Kyle, CEO, Evolve Biosystems Inc.		CONFIRMED: Anurag Pande, Vice President, Scientific Affairs, Sabinsa Corporation	
			
Sponsored Presentation For sponsorship opportunities please contact Gavin Hambrook at gavin@globalengage.co.uk			
10.45-11.45			
Morning Refreshments Poster Presentation Sessions & Scheduled One-to-One Meetings			

Session Chair:	R&D Outside the Gut	Probiotics Congress
11.45-12.15 Panel Discussion: Venture Capital and Microbiome Investment • What are companies looking for in a microbiome business investment? • Fundraising in microbiome • Venture Capital • Current market opportunities • Evaluating the funding climate • Perspective on building revenue models for the industry 12.15-12.45 CONFIRMED: • Malcolm Kendall, Co-Founder & CEO, Microbiome Insights, Inc. • Eric de la Fortelle, Venture Partner, Seventure Partners • Bernat Olle, Co-founder & Chief Operating Officer, Vedanta Biosciences, Inc. / Vice President, PureTech Invite to: Senior Representatives x2	COPD: The role of HIV and the Microbiome Next-generation sequencing techniques are now being used to understand changes in the lung microbiome in COPD. Studies have primarily focused on the bacterial communities in the lung microbiome. There has been little work examining the viral microbiome (virome) or the fungal microbiome (mycobiome), but these organisms likely play an important role in COPD and exacerbations. Viral and fungal communities may stimulate inflammation and lead to lung damage either directly or via impact on bacterial communities. The mycobiome has been examined in HIV-infected individuals with COPD. Analyses of bronchoalveolar lavage demonstrated that fungal communities were significantly different in HIV-infected individuals with COPD compared to HIV-infected individuals with normal lung function as well as different in those with HIV infection when compared to HIV-uninfected controls. The predominant change in the fungal communities was seen in differences in <i>Pneumocystis jirovecii</i>, a fungus that leads to opportunistic pneumonia (PCP) in HIV and has previously been linked to COPD in both the HIV-infected and HIV-uninfected population CONFIRMED: Alison Morris, Professor of Medicine and Immunology, University of Pittsburgh Understanding the Lung Microbiome and Host Mucosal Immune Response Interface Microaspiration is a common phenomenon in healthy subjects, its frequency is increased in several chronic inflammatory airway diseases. Aspiration-derived lung microbiota is associated with a distinct metabolic profile, demonstrating active microbial metabolism and challenging the prior preconception of sterility of the lower airways. Importantly, this enrichment of the lower airway microbiome with oral taxa is a major determinant of the inflammatory tone in the lower airway mucosa. The host immune phenotype associated with aspiration-derived lung microbiota is characterized by a Th-17 phenotype and a blunted alveolar macrophage TLR4 response. Targeting specific microbial metabolic pathways can impact host immune responses with important role on chronic airway inflammation CONFIRMED: Leopoldo Segal, Assistant Professor, Department of Medicine, New York University School of Medicine	Shaping and Controlling the Microbiome with Human Milk Oligosaccharides Human milk oligosaccharides (HMO) are a family of structurally diverse complex sugars that are highly abundant in and unique to human milk. HMO alter host-microbe interactions on multiple levels and contribute to shaping the microbiome early in life. Originally, HMO were discovered as a prebiotic "bifidus factor" that serves as a metabolic substrate for desired bacteria and shapes an intestinal microbiota composition with health benefits for the breast-fed neonate. Today, HMO are known to be more than just "food for bugs". An accumulating body of evidence suggests that HMO serve as soluble decoy receptors that prevent pathogen attachment to mucosal surfaces and lower the risk for viral, bacterial and protozoan parasite infections. HMO also directly impact bacterial growth to reduce the risk for infections. In addition, HMO modulate epithelial and immune cell responses to microbes. Our research program aims to characterize maternal factors that drive HMO composition, and discover HMO structure-activity relationships with potential for short- and long-term impact on maternal and infant health. CONFIRMED Lars Bode, Associate Professor, University of California, San Diego Sponsored Presentation: Title To Be Confirmed  CONFIRMED: Louise Vignæs, Preclinical Development Manager, Glycom A/S, Denmark
12.45-13.00 Company Showcase: Precision Microbiome Engineering in Agriculture and Beyond EpiBiome is working to curb the growing threat of multi-drug-resistant bacteria by eliminating the use of shared-class antibiotics in agriculture. Instead of antibiotics, EpiBiome deploys bacterial viruses known as phages, which are natural enemies of bacteria. These phages kill bacteria by giving them a lethal case of the flu. Phages have "Generally Recognized as Safe" (GRAS) status from the FDA for use on food intended for human consumption, and they pose no threat to humans. EpiBiome's first product will address the bacteria that cause bovine mastitis, an infection of the udder tissue in dairy cows, which costs the global dairy industry \$35 billion per year and is the #1 reason to give a cow antibiotics today. The company's strong expertise in bacterial profiling through next-generation sequencing will also be discussed.  CONFIRMED: Nick Conley, Chief Executive Officer, EpiBiome	Company Showcase: Microbiome Drug Development: How to Move Faster? Thanks to metagenomics and bioinformatics technologies, we can now recognize bacteria with a drug candidate potential. However, development process including strain identification, strain characterization, preclinical and clinical research phases have then to be performed, a time and money consuming procedure. Starting from a well-known bacteria with historical and documented use as Live Biotherapeutic Product to target new diseases is a good alternative to accelerate this process.  CONFIRMED: Maxence Desjonquères, Chief Executive Officer, Biose	Company Showcase Presentation: For sponsorship opportunities please contact Gavin Hambrook at gavin@globalengage.co.uk

13.00-13.30	Sponsored Presentation: Protecting the Gut Microbiome - Brief over of Intestinal Health and Importance of the Microbiome - Overview of SYN-004, Indication Aimed to Prevent Clostridium Difficile (C Diff) and Antibiotic Associated Diarrhea (AAD) - Overview of SYN-010, Indication Aimed to Treat Constipation Dominant Irritable Bowel Syndrome (IBS-C)  CONFIRMED: Isaac Bright, Vice President, Corporate Development, Synthetic Biologics, Inc.	Sponsored Presentation: Increasing Gut-barrier Function with Multispecies Probiotics Our gut epithelium is the largest bodily surface that separates our internal domain from the external world. The intestinal barrier prevents translocation of the trillions of bacteria and other compounds residing in the gut while allowing absorption of nutrients and water. The complex regulation of the intestinal barrier is determined by interactions between the host and the gut microbiota and can be disturbed by many factors. Problems with the gut barrier function have been associated with different intestinal (e.g. IBS, IBD) and extra-intestinal (e.g. metabolic, liver) diseases. The barrier function seems to play an important role even in the gut-brain axis, influencing de susceptibility to e.g. depression, migraine, ADHD and autism. Probiotics have been proven to prevent damaging of the epithelial barrier. In collaboration with research institutes, Winlove has developed a probiotic formulation that aims to restore the barrier integrity and reduce low-grade inflammation. Here we will present these developments, results of human trials as well as our expectations of further developments.  CONFIRMED: Elsbeth Pekelharing, Science Liaison, Winlove Probiotics	Panel Discussion: Exploring the Potential of Prebiotics - What is the potential of prebiotics? - Why are they exciting? - Where do we see it going in terms of therapeutics and a commercial standpoint? - Prebiotics v probiotics CONFIRMED: Michael Step, Chief Executive Officer, Ritter Pharmaceuticals Berenice Ocampo Guevara, Associate Director, Global Regulatory and Nutrition Science, Mead Johnson Nutrition Peter Cheung, Professor & Director, Food and Nutritional Science Program, Chinese University of Hong Kong Keith Garleb, Director R&D Programs, Abbott Nutrition R&D
13.30-14.30	Lunch		
	Afternoon Chair:	R&D Outside the Gut Afternoon Chair:	Probiotics in Animal Health Afternoon Chair:
14.30-14.55	The Microbiome Influences Homeostatic Control of Eukaryotic ABC Transporters at the Intestinal Mucosal Surface during Health and Disease The intestinal mucosa represents vast areas where host tissues are separated from the environment by a delicate but highly effective single layer of columnar epithelial cells, joined by tight junctions that selectively regulate movements of solutes and ions. This epithelial barrier functions normally in a state of tolerance to variations in dietary components and commensal bacteria, yet is poised to rapidly shift to an inflamed state where PMNs are recruited to protect the body from noxious materials and pathogenic bacteria. We have identified two sets of lipid-based signaling molecules that are released from the apical surface during periods of tolerance and inflammation that can control the recruitment of PMNs to the intestinal lumen. The role of the microbiome in intestinal function will be discussed in the context of the pathways that drive pro- and anti-inflammatory states in promoting injury or tissue healing. CONFIRMED: Beth McCormick, Professor & Executive Director, Center for Microbiome Research, University of Massachusetts Medical School	Title To Be Confirmed Lung Microbiome Invite to:	Solution Provider Presentation For sponsorship opportunities please contact Gavin Hambrook at gavin@globalengage.co.uk

14.55-15.20	Title To Be Confirmed CONFIRMED: Chandrabali Ghose, Former Chief Scientific Officer, Symbiotic Health	Bacterial Transmission in Utero and Inflammatory Bowel Disease Bacterial transmission from the mother to the baby occurs in utero with the initial intestinal colonization playing a crucial role in the development of the mucosal immune system in early childhood and potentially predisposing to immune-mediated diseases later in life. The MECONIUM (Exploring MEchanisms Of disease traNsmission In Utero through the Microbiome) Study was designed to investigate the bacterial transmission from pregnant mothers with and without inflammatory bowel disease and compare the composition of their newborn's and infant stool. The analyses, conducted in >80 families based on >700 samples including maternal stool, saliva, vaginal swab, placenta, amniotic membranes, and breast milk, as well as newborn umbilical cord blood, meconium, and serial infant stools, demonstrated a distinct signature of the disease in babies at birth and months thereafter. CONFIRMED: Inga Peter, Associate Professor, Department of Genetics and Genomic Sciences, Icahn School of Medicine at Mount Sinai	Title To Be Confirmed CONFIRMED: Jan Suchodolski, Professor, Department of Small Animal Clinical Sciences, Texas A&M University
15.20-15.45	Title To Be Confirmed CONFIRMED: Sean Davies, Associate Professor of Pharmacology, Vanderbilt University	Title To Be Confirmed Microbiome and Women's Health CONFIRMED: Lindsay Peed, Lead Scientist Life Sciences, Microbiology, Kimberly-Clark	Animal Probiotics: Would One Size Fit All? - We identified potential probiotics associated with animal growth performance in beef cattle, pigs and chicken by analyzing their gut microbiomes using the Illumina MiSeq platform. - The potential probiotics identified from these animal species are different. - We propose the development of species-specific probiotics to promote farm animal growth performance. CONFIRMED: Jiangchao Zhao, Assistant Professor, University of Arkansas
15.45-16.10	Microbiome and Health CONFIRMED: Harro Timmerman, Principal Scientist Microbiota in Health & Disease, NIZO Food Research BV, The Netherlands	The Effectiveness of <i>Streptococcus salivarius</i> against the Otopathogens of otitis media Streptococcus salivarius is an oral probiotic that is known and used commercially for its ability to inhibit the growth of oral pathogens. The potential ability of Streptococcus salivarius to inhibit the growth of Streptococcus pneumoniae, Nontypeable Haemophilus influenza and Moraxella catarrhalis will be investigated. CONFIRMED: Robert Osgood, Associate Professor of Microbiology, Rochester Institute of Technology	Title To Be Confirmed Animal Probiotics RESERVED: Jens Noesgaard Jørgensen, Global Product Manager, Swine Probiotics, Chr. Hansen Animal Health
16.10-16.40	Afternoon Refreshments		
16.40-17.05	Microbiota and Mental Health: Gut Bacteria Influences Brain Structure and Behavior - Scientists have established a link between gut bacteria and anxiety-like behaviors in animal models and with emotional brain regions in healthy people. - Host genetics and environmental factors influence brain structure and behavior - Our results show that differences in relative abundance of clinically relevant commensals are also linked to brain structure and behavior CONFIRMED: Jane Foster, Associate Professor, Department of Psychiatry & Behavioural Neurosciences, McMaster University, Canada	Targeted Modulation of Human Microbiome with Precision-guided Antimicrobial Peptides The lack of effective tools to modulate individual species within a complex microbial community poses a major barrier to studying human microbiome and its associated diseases. We developed novel precision guided antimicrobial peptides for the targeted removal of specific pathogen within complex microbiome communities. One of these compounds, C16G2, is currently at FDA phase II clinical trial for the targeted removal of human cariogenic Streptococcus mutans to treat and prevent tooth decay. The preliminary data showed its efficacy in modulating human oral microbiome into healthy conditions. CONFIRMED: Wenyuan Shi, Professor and Chair of Oral Biology, UCLA Schools of Medicine and Dentistry	Genomics-powered Screens for Identifying Best Fit Probiotics - Novozymes has a strain collection that contains thousands of bacterial strains - Bacterial strains are screened for safety, stability and performance to identify ones fit for probiotic use. - Presentation will be focused on our genomics and bioinformatics approaches to aid in screening and characterization of novel bacterial strains that have probiotic potential. CONFIRMED: Ravi Kumar, Scientist II, Novozymes Inc.

17.05-17.30	Title To Be Confirmed Gut-Brain Axis	Dietary Raw Potato Starch Modulates the Butyrate-producing Microbiota and Host Immune Responses in Pigs Butyrate is critical for the maintenance of intestinal homeostasis. Inclusion of 5% raw potato starch (RPS) in weaning piglet diets significantly changes the intestinal bacterial community leading to an increase in butyrate and lactate concentrations in the proximal colon and cecum. Shifts in the microbial community were associated with concurrent changes in host immune responses suggesting increased tolerance of commensal microbes. These data suggest that RPS may be an effective prebiotic to promote gut health and mitigate early life intestinal complications.
	CONFIRMED: Ying-Chieh Tsai, Professor, National Yang Ming University, Taiwan	CONFIRMED: Julian Trachsel, PhD Student, Iowa State University / USDA-ARS
17.30	Conference Close	



Venue

San Diego Marriott La Jolla
4240 La Jolla Village Drive
La Jolla, California 92037
United States

A discounted group rate will be available to all attendees. Details of how to book are available on registration. Space is limited and accommodation is available on a first come basis.



For further information please contact Steve Hambrook, Conference Director,

steve@globalengage.co.uk

Further Information

POSTERS

	Title	Principal Author(s)	Affiliation
1	Oxalate metabolism results from redundant microbial networks in the mammalian gut	Aaron W. Miller	Cleveland Clinic
2	Exposure to Bacterial Amyloid in the Gut enhances Alpha Synuclein (AS) Misfolding and Neuroinflammation in the brain	Robert Friedland, Shu Chen, Madhavi Rane, Evelyne Gozal, Shinying Jin, Rekha Jagadapillai, Andrew M. Roberts, Ruolan Liu, Eliezer Masliah, Vilius Stribinskis	Univ. of Louisville
3	Impact of Short-Chain Galactooligosaccharides on the Gut Microbiome of Lactose Intolerant Individuals	M. Andrea Azcarate-Peril ¹ , Dennis Savaiano ² , Andrew Ritter ³ , and Todd R. Klaenhammer ⁴	¹ Cell Biology and Physiology, and Microbiome Core Facility, University of North Carolina, Chapel Hill ² Nutrition Sciences, Purdue University, W. Lafayette, IN. ³ Ritter Pharmaceuticals, Los Angeles, CA ⁴ Food, Bioprocessing & Nutrition Sciences, North Carolina State University, Raleigh, NC

More to follow...

Further events in the series:

3rd Microbiome & Probiotics Congress Asia – Hong Kong – 1-2 March 2017

<http://www.globalengage.co.uk/microbiomeasia.html>

4th Microbiome & Probiotics Forum Europe – Amsterdam – 3-4 April 2017

<http://www.globalengage.co.uk/microbiota.html>

5th Microbiome & Probiotics Forum USA – San Diego – TBC Fall 2017

<http://www.globalengage.co.uk/microbiome.html>