



**12<sup>TH</sup> MICROBIOME R&D & BUSINESS COLLABORATION FORUM: USA**  
**9<sup>TH</sup> PROBIOTICS & PREBIOTICS CONGRESS: USA**  
**6<sup>TH</sup> SKIN MICROBIOME & COSMECEUTICALS CONGRESS: USA**

**OCTOBER 17-18, 2024 – SAN DIEGO, USA**

Global Engage is pleased to announce the **12<sup>th</sup> Microbiome, Probiotics & Prebiotics R&D and Business Collaboration Forum**, which is confirmed to be held on October 17-18 in San Diego at the La Jolla Marriott and co-located with the **6<sup>th</sup> Skin Microbiome & Cosmeceuticals Congress**.

This world-renowned event which attracted 265 industry, academic, and investment leaders last year, enables the discussion of the most scientific cutting-edge microbiome, probiotics and skin-based research; the challenges and opportunities in translating research towards commercialisation, and partnerships and collaborations that secure investment. With 3 conferences and 8 tracks focusing on the topics below, there is ample content to learn from top scientists, network and broaden your connections and should you wish showcase your work in the poster presentation sessions or get involved in the interactive panel and roundtable discussions.

**Conference Session Schedule**

	12 <sup>th</sup> Microbiome, Probiotics & Prebiotics R&D & Business Collaboration Forum			6 <sup>th</sup> Skin Microbiome & Cosmeceuticals Congress
	Track 1	Track 2	Track 3	Track 4
Day 1	Gut Microbiota for Health & Disease & Drug Development	Gut-Brain Axis	Infant Health, HMO & Nutrition	Skin Microbiome & Cosmeceuticals
Day 2	Investment, Regulations & Manufacture	Women’s Health & Urobiome	Probiotics, Personalised Nutrition & Cardiometabolic Diseases	Skin Microbiome & Cosmeceuticals

- 75 strong senior level speaker faculty
- Expert-led roundtables and interactive panel sessions
- Two 50-minute start-up flash presentation sessions
- Unique academic and industry joint focus
- Over 7 hours of networking time
- A fantastic reputation as the number one microbiome scientific & networking event.

# 12<sup>th</sup> Microbiome, Probiotics & Prebiotics R&D and Business Collaboration Forum

## Sponsors 2024

### Platinum



### Gold



### Silver



### Exhibitors / Content Sponsors



### Gut Health & Disease

- Alan Murray, CEO, Various Food and Beverage Companies
- Amir Zarrinpar, Associate Professor, Division of Gastroenterology, University of California, San Diego
- Braden Tierney, Instructor, Weill Cornell Medical College /Harvard Medical School
- Carlotta Ronda, Principal Investigator, Innovative Genomics Institute at UC Berkeley
- Cassandra Isley, Chief Executive Officer, Microbiome Alliance for Disease Prevention
- Cristina Llorente, Assistant Professor, Div. Gastroenterology, Dept. Medicine, UC San Diego
- Denise Kelly, Investment Advisor, Seventure Partners
- Jan Claesen, Assistant Professor, Department of Cardiovascular and Metabolic Sciences, Cleveland Clinic Lerner College of Medicine (Track Chair)
- Ren-Hau Lai, Director of Innovation and Product Development, Athletic Greens (Track Chair)
- Xin Zhou, Research Scientist, Snyder Lab, Stanford

### Gut Brain Axis

- Alexandra Castillo-Ruiz, Assistant Professor, Michigan State University
- Bharat Dixit, Chief Technology Officer, Adiso Therapeutics
- Haydeh Payami, Professor of Neurology and Genomics, Strain Endowed Chair in Parkinson's Disease, University of Alabama at Birmingham
- James Morton, Consultant, Simons Foundation
- Jun Sun, Professor/Associate Head, Department of Medicine, University of Illinois Chicago
- Noelle Patno, Chief Scientific Officer, Bened Life
- Robert Yolken, Professor of Pediatrics, Johns Hopkins (Reserved)
- Stewart Campbell, CEO, SVP R&D, Axial Therapeutics (Reserved)

### Investment, Regulation and Manufacture

- Bharat Dixit, Chief Technology Officer, Adiso Therapeutics
- Paul Carlson, Principal Investigator, CBER, FDA
- Ryan Garrett, Head of Process Development, Vedanta
- Sathya Janardhanan, VP, Manufacturing, Rise Therapeutics
- Laurie Rey, Head of CDMO Business Development, Lallemand
- Senior Representative, Biose

### Infant Health, HMO & Nutrition

- Amber Teufel, Global Baby, Feminine, and Family Care R&D Group Head/Microbiologist, Procter & Gamble
- Cecile Vernochet, Discovery Project Lead, Gates Medical Research Institute
- David A. Mills, Distinguished Professor, Peter J. Shields Endowed Chair in Dairy Food Science, Department of Food Science and Technology, University of California-Davis
- Kimberley Sukhum, Head of Science, Tiny Health
- Leila Strikland, CEO & Co-Founder, BIOMILK
- Noel Muller, Associate Professor of Epidemiology, Johns Hopkins Bloomberg School of Public Health (Track Chair)
- Pedro J. Torres, Principal Scientist, Computational Biology and Data Science, Persephone Biosciences
- Stephanie Fraley, Associate Professor, Shu Chien-Gen Lay Dept of Bioengineering, UCSD

### Women's Health & Urobiome

- Alex Sakatos, Co-Founder & CEO, Ancilia Biosciences
- Amanda L. Lewis, Professor, Obstetrics, Gynecology, and Reproductive Sciences, UCSD
- Craig R. Cohen, Professor, Department of Obstetrics, Gynaecology & Reproductive Sciences, University of California San Francisco
- Hana Janebdar, Co-Founder & CEO, Juno Bio
- Krystal Thomas-White, Senior Scientist, Evvy
- Laura Sycuro, Assistant Professor, University of Calgary
- Oliver Worsley CEO & Co-Founder, Sequential (reserved)
- Rebecca Vongsa, Technical Leader, Life Sciences, Kimberly Clark Corporation

### Probiotics & Personalized Nutrition


- Amy Smith, Director, Global Regulatory Affairs - Health, IFF
- Aubrey Levitt, CEO, Postbiotics Plus Research LLC
- Jason Bush, Chief Scientific Officer, Solnul
- Johanna Maukonen, Director, Global Clinical Innovation & Translation, IFF
- Jonathan Scheiman, Founder & CEO, FitBiomics
- Mark Haupt, Chief Medical Officer, IFF (Reserved)
- Michael Hartman, Plexus Worldwide (Track Chair)
- Noah Zimmerman, Chief Technology Officer, Verb Biotics
- Se Jin Song, Director of Research, Applications for Microbiome Innovation, UCSD
- Zac Lewis, Principal, Lewpine Consulting

### Skin Microbiome & Cosmeceuticals



- Andrea Nardelli, Post-Doctoral Fellow McMaster University- Farncombe Family Digestive Health Research Institute
- Angela Christiano, Professor of Genetics & Development, Columbia University
- Bradley Ringeisen, Executive Director, Innovative Genomics Institute (IGI)
- Brent Ridge co-founder, Beekman1802
- Cheri Ackerman, Co-Founder & CEO, Concerto Biosciences
- Eric (Chun Ming) Huang, Professor, Arizona State University, USA
- Jennifer Cookson, Senior Director of Development Arcaea
- Jessica O'Connell, Partner, Covington & Burling LLP
- Josh Parris, Senior Scientist, Life Sciences, Kimberly Clark Corporation
- Julia Durack, VP of R&PD, Symbiome; Director, Holobiont Medical Research Foundation
- Kera Nyemb-Diop, Lead Nutritionist, Fonterra
- Lada Rasochova, CEO, Dermala
- Natalise Robinson, Co-Founder, Parallel Health
- Nicole Scott, Founder & CEO, Cybele
- Ping Hu, R&D Director, Principal Scientist, Research & Development, Procter & Gamble (Reserved)
- Robert Brucker, Co-Founder and Chief Scientific Officer, Dermibiont (Reserved)
- Sam Samaras, Global Vice President Science and Technology, Global Vice President Clinicals, Unilever (Reserved)
- Senior Representative, AO Biome (Reserved)
- Tiina Orasmäe-Meder, CEO and founder, Meder by Dr Tiina Meder
- Xin Zhou, Postdoctoral Fellow, Snyder Lab, Stanford

# 12<sup>th</sup> Microbiome, Probiotics & Prebiotics R&D and Business Collaboration Forum

Day One – Thursday October 17 – San Diego

12 <sup>th</sup> Microbiome & Probiotics R&D & Business Collaboration Forum			6 <sup>th</sup> Skin & Cosmeceuticals Congress
8:50	Global Engage - Welcome address and track chair opening remarks		Global Engage - Welcome address and track chair opening remarks
9:00 - 9:45	<p>Keynote Address:  <b>The milk-enriched infant gut microbiome drives functional capacity during both breast feeding and weaning</b>                      Milk directs the enrichment of the neonatal gut microbiome, an assembled “organ” with important consequences on host health. A prominent feature of human milk is an array of glycans that enrich a protective microbiota often dominated by bifidobacteria. This milk-enriched gut microbiome naturally transforms upon the consumption of solid foods resulting in a rearrangement of gut taxa and associated functions. Recently, we have identified how specific milk glycans induce expression of genes that promote growth on plant polysaccharides among select bifidobacteria, suggesting that milk also prepares gut taxa for the weaning transition. Moreover, advances in new glycomics tools and databases, including the Davis Food Glycopedia, are increasing our understanding of complex polysaccharides in weaning foods and their catabolism by the infant gut microbiota. Analysis of these natural process will shed light on dietary and probiotic tools to promote a protective gut microbiota for at-risk neonates from birth through weaning.                      Confirmed:  <b>David A. Mills, Distinguished Professor, Peter J. Shields Endowed Chair in Dairy Food Science, Department of Food Science and Technology, University of California-Davis</b></p>		<p>Skin Microbiome Case Study</p> <p>Reserved:  <b>Sam Samaras, Global Vice President Science and Technology, Global Vice President Clinicals, Unilever</b></p>
9:45 - 10:20	<p>Keynote Address:  <b>Changing the landscape of Parkinson’s disease</b>                      90 disease-associated genes and numerous well-established environmental risk factors could not explain PD. First emerging in 2015, microbiome studies have since shed new lights on the PD landscape, unearthed new players in PD pathogenesis, and provided new targets for treatment.                       Confirmed:  <b>Haydeh Payami, Professor of Neurology and Genomics, Strain Endowed Chair in Parkinson’s Disease, University of Alabama at Birmingham</b></p>		<p>Expanding the population demographic in microbiome studies challenges our prevailing concepts of a healthy adult skin microbiome.</p> <ul style="list-style-type: none"> <li>• The importance of improving understanding of skin microbiomes from around the globe</li> <li>• Lessons from broadening the population demographic in microbiome studies</li> <li>• Applying these findings to facilitate product development.</li> </ul> <p>Confirmed:  <b>Julia Durack, VP of R&amp;PD, Symbiome; Director, Holobiont Medical Research Foundation</b></p>
10:20 - 10:50	<p>30-Minute Solution Provider Presentation</p>  <p>Your global CDMO for Microbiome Therapeutics</p>		<p>30-Minute Solution Provider Presentation                      (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a>)</p>
10:50 - 11:40	<p>Morning Refreshments                      Poster Presentations                      One-to-One Partnering Meetings</p>		
	<p><b>Theme:</b>                      Gut Microbiota for Health &amp; Disease</p>	<p><b>Theme:</b>                      Gut-Brain Axis</p>	<p><b>Theme:</b>                      Infant Health, HMO &amp; Nutrition</p>
11:40 - 12:05	<p>Gut Health &amp; Disease Case Study</p> <p>Confirmed:  <b>Amir Zarrinpar, Associate Professor, Division of Gastroenterology, University of California, San Diego</b></p>	<p>Gut-Brain Axis Case Study</p> <p>Reserved:  <b>Robert Yolken, Professor of Pediatrics, Johns Hopkins</b></p>	<p>Advances in a microbial ensemble for atopic dermatitis</p> <ul style="list-style-type: none"> <li>• Concerto used its proprietary kChip technology to map the skin microbe interactome and identify Ensemble No.2 (ENS-002), a microbial ensemble that prevents the</li> </ul>

			<p>childhood malnutrition and intestinal inflammation risk (Kane 2015). A healthy infant gut, rich in Lactobacillus and Bifidobacterium, supports vital functions like immune system development and resistance to pathogens. Gates MRI is conducting clinical trials investigating the potential of <i>Bifidobacterium longum ssp infantis</i> probiotic products to support weight gain in infants being treated for severe acute malnutrition. In addition, we are comparing mechanism of action and efficacy in preclinical models of commercial <i>B.infantis</i> probiotic strains.</p> <p>Confirmed:  <b>Cecile Vernochet,, Discovery Project Lead, Gates Medical Research Institute</b></p>	<p>bacterium <i>S. aureus</i> from overgrowing and secreting toxins, an underlying cause of atopic dermatitis.</p> <ul style="list-style-type: none"> <li>• Learn about the kChip discovery technology that reveals the ecological underpinnings of the microbiome, thereby enabling the design of defined microbe-based interventions to benefit human health.</li> <li>• Hear the latest update on ENS-002's manufacturing and first-in-human dose escalation trial.</li> </ul> <p>Confirmed:  <b>Cheri Ackerman, Co-Founder &amp; CEO, Concerto Biosciences</b></p>
<p>12:05 - 12:30</p>	<p><b>Leveraging multi-omic data science to build the next-generation of microbial-based therapies</b></p> <p>The next generation of microbial therapeutics (e.g., probiotics) will look nothing like what we see on shelves now. Generally, the organisms used in therapy development have been limited to a tiny window of the tree of life, comprising easily cultured and well-characterized species, with limited consideration for strain-level variation. The perhaps “best” strains for treating a given phenotype were either not known or not practical from a productization cost standpoint. However, three simultaneous advances will in the next decade flip this paradigm, allowing for the creation of functionally-driven, strain-specific microbial therapeutics. These are 1) multi-omic data science (e.g., DNA sequencing and metabolomics at massive scale), 2) high-throughput, high-volume culturomics, and 3) increasingly large human clinical cohorts with paired microbiome sequencing information. The union of these tools will enable the commercialization of microbial therapies that are directly built based on their relationship to specific human diseases and subpopulations. Here, I will discuss where to look for bellwethers in academic research signaling these advances, both in my work and the broader field, with an emphasis on the complex interplay between diet and gut microbiome interactions.</p> <p>Confirmed:  <b>Braden Tierney, Instructor, Weill Cornell Medical College /Harvard Medical School</b></p>	<p><b>The maternal microbiota programs brain development in mice: a potential role for bacterial metabolites</b></p> <p>Mammals experience a massive colonization by microorganisms at birth. We previously reported that germ-free (GF) newborn mice have altered brain development, including increased cell death in the hypothalamus. To test whether these effects are due to postnatal microbial exposure, or programmed <i>in utero</i> by the maternal microbiota, we cross-fostered GF newborns immediately after birth to conventionally colonized (CC) mothers, and collected their brains a week later. Interestingly, the GF brain phenotype largely persisted despite a normal microbiota, suggesting programing effects of the maternal microbiota. To probe for mechanism, we treated pregnant CC mice with bacterial metabolites and collected offspring during the first three days postnatal. We found that treatment reduced cell death in the hypothalamus. Thus, maternal bacterial metabolites may be important neurodevelopmental agents.</p> <p>Confirmed:  <b>Alexandra Castillo-Ruiz, Assistant Professor, Michigan State University</b></p>	<p><b>Tracking probiotic strains across the infant and child gut microbiome</b></p> <ul style="list-style-type: none"> <li>• The first 1,000 days of life are critical for immune training. Infants with gut microbiome imbalances are at elevated risk of atopic disease including eczema and food allergies. Early action can shift microbiome composition and lower disease risk. The Tiny Health gut microbiome test empowers parents to take those early actions through personalized recommendations.</li> <li>• The new Tiny Health Strain Tracker can track probiotic strain colonization and efficacy in remodeling the infant gut, characterize strain transfer from mother to infant, identify strain sharing between family members, and validate probiotic formulations at the strain level.</li> <li>• This tool has enabled us to characterize probiotic strain presence across a width breadth of samples including unique disease conditions, diet, and other variables. We envision a future in which personalized gut microbiome care is the clinical standard.</li> </ul> <p>Confirmed:  <b>Kimberley Sukhum, Head of Science, Tiny Health</b></p>	<p><b>Skin Microbiome Case Study</b></p> <p>Confirmed:  <b>Kera Nyemb-Diop, Lead Nutritionist, Fonterra</b></p>

12:30 - 1:00	<b>30-Minute Solution Provider Presentation</b> (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a> )	<b>30-Minute Solution Provider Presentation</b>  LALLEMAND HEALTH SOLUTIONS	<b>15-Minute Solution Provider Presentation</b>  <b>15-Minute Solution Provider Presentation</b>	<b>30-Minute Solution Provider Presentation</b> (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a> )
<b>Lunch</b> One-to-One Partnering Meetings				
2:00 - 2:30	<b>30-Minute Solution Provider Presentation</b> (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a> )	<b>30-Minute Solution Provider Presentation</b> (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a> )	<b>30-Minute Solution Provider Presentation</b> (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a> )	<b>30-Minute Solution Provider Presentation</b> (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a> )
2:30 - 2:55	<b>Longitudinal profiling of the microbiome at four body sites reveals core stability and individualized dynamics during health and disease</b> <ul style="list-style-type: none"> <li>Human microbiomes from different body sites are highly individualized and stable over time.</li> <li>Coordinated microbial dynamics between body sites are observed in response to disease</li> <li>Besides Gut microbiome, Skin microbial composition and stability are also altered with insulin resistance</li> </ul> <p>Confirmed:  <b>Xin Zhou, Research Scientist, Snyder Lab, Stanford</b></p>	<b>Trials To Testimonials: A Probiotic for Autism</b> Multiple trials have demonstrated that probiotic PS128 benefits Autistic children, but what about Autistic adults? Through three randomized, double-blind, placebo-controlled trials and one real world study, <i>Lactiplantibacillus plantarum</i> PS128 addressed anxiety and other behaviors in autistic children, enrolling people younger than 20. This talk will review the evidence of how PS128 provides benefits in autism and show lessons learned from the field through analysis of customers' satisfaction with the product containing PS128.  Confirmed: <b>Noelle Patno, Chief Scientific Officer, Bened Life</b>	<b>My Baby Biome Study: A Data-Driven Approach to Infant Probiotic Development</b> The infant microbiome plays a crucial role in establishing a healthy host-microbiome relationship. Recent research has identified a critical window in early-life (the first 3 months) where gut microbial dysbiosis has the most impact on human immune development. Existing infant microbiome datasets lack comprehensive multi-omics analysis and sufficient racial and ethnic diversity for population-wide biomarker discovery. Persephone Biosciences addressed this gap through the My Baby Biome (MBB) study, enrolled ~700 infants up to the age of 3 months across the U.S, representative of US birth and feeding modes Using shotgun metagenomic sequencing and metabolomics, we identified three microbiome compositional clusters. A healthy cluster was distinguished by high Bifidobacterium levels and association with specific anti-inflammatory metabolites. Further exploration of MBB isolated strains and commercial strains in ex-vivo gut environments revealed their impact on microbial composition and function. These findings provide a data-driven approach to infant probiotic development.  Confirmed: <b>Pedro J. Torres, Principal Scientist, Computational Biology and Data Science, Persephone Biosciences</b>	<b>Please attend presentation in Room 1</b>



<p>2.55 - 3.20</p>	<p><b>Session One - Cross-Event Poster Presentation Flash Presentations &amp; Start-Up Showcase Presentations</b></p> <p>Poster presenters and start-up companies will be provided with the opportunity to give a flash 3-minute overview of their work.</p>	<p><b>Microbiome and metabolite regulate the progression of ALS through the gut-brain axis</b></p> <p>Amyotrophic lateral sclerosis is a neurodegenerative disorder. Despite extensive studies, it remains challenging to treat ALS. Recent ALS studies have shown dysbiosis is correlated with intestinal inflammation and change of intestinal integrity in ALS. The novel concepts and the roles of microbiome and microbial metabolites through the gut-microbiome-neuron axis in ALS pathogenesis have been slowly recognized by the neurology research field. Here, we will discuss our new data and understanding of microbial metabolites in reducing TDP43 aggregation and inflammation in ALS. We propose that the mechanistic and translational studies that shift from suspension of disbelief to cogent ingenuity, and from bench study to bed-side application, should allow new strategies of diagnosis and treatment for ALS.</p> <p>Confirmed: <b>Jun Sun, Professor/Associate Head, Department of Medicine, University of Illinois Chicago</b></p>	<p><b>Cross-Event Roundtables - Session One</b> <i>Roundtables are informal, small-group interactive discussions on key topics in the field. Discussion leaders will introduce sub-topics/questions for discussion and roundtable attendees are encouraged to participate actively in the session.</i></p> <p><b>Roundtable 1 – Probiotics Claims and IP</b></p> <p>Confirmed: <b>Jessica O’Connell, Partner, Covington &amp; Burling LLP</b></p> <p><b>Roundtable 2 - The challenge of probiotic product development and the future</b></p> <p>Confirmed: <b>Ren-Hau Lai, Director of Innovation and Product Development, Athletic Greens</b></p> <p><b>Roundtable 3 – Antibiotics and Infant health</b></p> <p>Confirmed: <b>Stephanie Fraley, Associate Professor Shu Chien-Gen Lay Dept of Bioengineering, UCSD</b></p>	<p><b>Panel discussion – Paving the way to clinical validity and improving health outcomes in the microbiome industry</b></p> <p><b>Chair</b> Confirmed <b>Natalise Robinson, Co-Founder, Parallel Health</b></p> <p><b>Panellist</b> Confirmed: <b>Tiina Meder, CEO &amp; Founder, Meder Beauty</b></p> <p><b>Bradley Ringeisen, Executive Director, Innovative Genomics Institute (IGI)</b></p> <p><b>Lada Rasochova, CEO, Dermal</b></p>
<p>3.20 - 3.45</p>		<p><b>Role of the Immune T Regulatory Cells in Mood Disorders and Alzheimer’s Disease Phenotype as a therapeutic target in Altered Gut-brain Axis cross-talking</b></p> <p>The role of the gut-brain axis in the onset and progression of degenerative conditions, including Alzheimer’s disease, will be discussed. In particular, the implication of the causative role of T-regulatory cells mediated influence on adaptive immunity in the gut-brain axis communication. Discussion of strategies to intervene in the brain degenerative progression by targeting selected T-regulatory mediated mechanisms to mitigate abnormal brain permeability and disease progression in response to stress-induced mood/psychological impairment associated with the onset of Alzheimer’s disease phenotype. Discussion of novel strategies to move from preclinical observations to the clinical setting.</p> <p>Confirmed: <b>Giulio M Pasinetti, The Saunders Family Chair in Neurology, Professor in Neurology, Professor of Psychiatry, Professor of Geriatric and Adult Development Director, Icahn School of Medicine at Mount Sinai and JJ Peters Bronx VA Medical Center</b></p>	<p><b>Roundtable 4 – New discoveries leveraging at-home microbiome profiling and probiotic strain tracking via shotgun metagenomics</b></p> <p>Probiotic companies often have formulations that combine multiple strains and while some individual strains are clinically backed, companies often have challenges generating robust clinical data at the formulation level to support product health claims. Shotgun sequencing presents a more accessible and reliable way for end consumers, nutrition companies and researchers to detect potential colonization and functional effects from these probiotic supplements. These effects are much more pronounced in the infant probiotic space where the infant gut is more uniquely adapted to colonize bifidobacterium probiotics. We will discuss how these approaches can help the industry advance forward with better observational and clinical evidence</p> <p>Confirmed: <b>Cheryl Sew Hoy, CEO &amp; Founder, Tiny Health</b></p>	

3.45 – 4.35	<b>Afternoon refreshments One-to-One Partnering Meetings Odd-Numbered Poster Presentations</b>			
4.35 – 5.05	<b>30-Minute Solution Provider Presentation</b> (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a> )	<b>30-Minute Solution Provider Presentation</b> (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a> )	<b>30-Minute Solution Provider Presentation</b> (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a> )	<b>30-Minute Solution Provider Presentation</b> (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a> )
5.05 – 5.30	<b>Targeted microbiome engineering</b> <ul style="list-style-type: none"> <li>• In vivo Microbiome Engineering</li> <li>• Human-Microbiome interactions</li> <li>• Microbiome-based Therapeutics</li> </ul> <p>Confirmed: <b>Carlotta Ronda, Principal Investigator, Innovative Genomics Institute at UC Berkeley</b></p>	<b>Multi-level analysis of the gut–brain axis shows autism spectrum disorder-associated molecular and microbial profiles</b> Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by heterogeneous cognitive, behavioral and communication impairments. Disruption of the gut–brain axis (GBA) has been implicated in ASD although with limited reproducibility across studies. Here, we developed a Bayesian differential ranking algorithm to identify ASD-associated molecular and taxa profiles across 10 cross-sectional microbiome datasets and 15 other datasets, including dietary patterns, metabolomics, cytokine profiles and human brain gene expression profiles. We found a functional architecture along the GBA that correlates with heterogeneity of ASD phenotypes, and it is characterized by ASD-associated amino acid, carbohydrate and lipid profiles predominantly encoded by multiple microbial species and correlates with brain gene expression changes, restrictive dietary patterns and pro-inflammatory cytokine profiles. We also show a strong association between temporal changes in microbiome composition and ASD phenotypes in the context of a fecal matter transplant.	<b>BIOMILQ on expanding the possibilities for HMOs with mammary-based biomanufacturing</b> Of the ~200 known HMO structures, less than 10% can be produced commercially today. BIOMILQ is building a novel, patented process to unlock the other 90% by leveraging the unique capability of human mammary epithelial cells (hMECs). Due to the complex enzymatic pathways involved in HMO production – a challenge that has held the field back for over a decade – hMECs may be the only feasible platform to produce structurally complex HMOs. BIOMILQ is at the forefront of building a system to produce a complex mixture of HMOs that support infant gut, immune, and brain health, in addition to other applications for improving health across the lifespan.	<b>Sensitive skin microbiome: latest findings and clinical cases.</b> <ul style="list-style-type: none"> <li>• The relationship between skin microbiome and sensitivity remains unclear, but a new consensus suggests a balanced interplay between skin cells and bacterial populations maintains healthy skin barrier integrity.</li> <li>• Recent findings indicate a unique sensitive skin microbiome has lower diversity and reduced S. epidermidis compared to non-sensitive skin. This can be particularly relevant for individuals with compromised skin barriers, such as those with sensitive, reactive skin, or those suffering from allergies or dermatosis such as acne, rosacea.</li> <li>• Cosmeceutical ingredients that increase an amount of free water in the Stratum Corneum, along with prebiotics promoting S. epidermidis growth and suppressing C. acnes or P. ovale, show therapeutic potential. Clinical cases using skincare with prebiotics and symbiotic ingredients in sensitive skin demonstrate efficacy, offering insights for dermatologists and public recommendations.</li> </ul> <p>Confirmed: <b>Tiina Orasmäe-Meder, CEO and founder , Meder by Dr Tiina Meder</b></p>



5.30 – 5.55	<p><b>Panel Discussion: - The Shifting Winds of Microbiome Investment</b></p> <p><b>Chair</b></p> <p>Confirmed: <b>Denise Kelly, Investment Advisor, Seventure Partners</b></p> <p><b>Panelists</b></p> <p>Confirmed: <b>Alan Murray, CEO, Various Food and Beverage Companies</b></p>	<p><b>Development of a SS-LBP, ADS024, for the treatment of PD</b></p> <p>Over the years, evidence for a close link between the gut and brain (gut-brain axis) has been mounting, leading to a paradigm shift in the understanding of diseases involving the nervous system, including Parkinson disease (PD) and multiple sclerosis (MS), to name a few. It has been recognized that some microbes in the gut modulate the production of several metabolites that have neuromodulatory functions and signal via the vagus nerve and the circulation. ADS024 is a single-strain live biotherapeutic (SS-LBP) that can impact the nervous system via its unique properties and is currently being studied for the treatment of Parkinson disease.</p> <p>Confirmed: <b>Bharat Dixit, Chief Technology Officer, Adiso Therapeutics</b></p>	<p><b>Infant Health, HMO &amp; Nutrition Case Study</b></p> <p>Confirmed: <b>Senior Representative, Novonesis</b></p>	<p><b>The Science of Kindness</b></p> <p>Beekman 1802 is a skin health company with two key ingredients: goat milk and Kindness and is one of the fastest growing beauty companies in America. Learn their approach to product development and consumer education around the microbiome. An insightful discussion of how the research you are conducting now gets into the hands of the consumer of the future.</p> <p>Confirmed: <b>Brent Ridge, Co-Founder, Beekman1802</b></p>
5.55 – 6.20		<p><b>Gut-Brain Axis Case Study - Parkinson program</b></p> <p>Reserved: <b>Stewart Campbell, CEO, SVP R&amp;D, Axial Therapeutics</b></p>	<p><b>What's bugging your baby's skin?: insights from healthy and diaper dermatitis skin</b></p> <p>It has been recognized for nearly a century that human beings are inhabited by a remarkably dense and diverse microbial ecosystem, yet we are only just beginning to understand and appreciate the many roles that these microbes play in human health and development. Previous studies on infant skin health has focused on Candida species but little is known on the full microbial composition across different areas and even less is known on how these communities change during disease/inflammatory states. This clinical trial revealed to us distinct communities that exist across 4 different regions of the diapered area as well as demonstrated trends in how the populations change from healthy skin to disease state. We will discuss these microbial communities and what the indications are for understanding the roles it plays in disease states like diaper dermatitis (DD).</p> <p>Confirmed: <b>Amber Teufel, Group Head/Microbiologist, Baby, Feminine, and Family Care R&amp;D Life Sciences Division, Procter &amp; Gamble</b></p>	<p><b>Skin dysbiosis as a complication of biologics and immunosuppressant agents use: challenges and future directions</b></p> <p>Description of Skin lesions in patients treated with immunosuppressant and other biological agents, such as atopic dermatitis, sensitive skin, psoriasiform eczema, and acneiform dermatitis; presentation of complex clinical pictures. The consideration arises whether skin dysbiosis contributes to the pathophysiology of these manifestations as complications of immunosuppressant agent use. The potential impact of therapeutic manipulation of skin microbial communities, including the use of pre- and probiotics, emerges as an intriguing avenue to explore in efforts to maintain skin health.</p> <p>Confirmed: <b>Andrea Nardelli, Post-Doctoral Fellow McMaster University- Farncombe Family Digestive Health Research Institute</b></p>
6.20	<b>Drinks Reception</b>			

# 12<sup>th</sup> Microbiome, Probiotics & Prebiotics R&D and Business Collaboration Forum

Day Two – Thursday October 17 – San Diego

12 <sup>th</sup> Microbiome & Probiotics R&D & Business Collaboration Forum		6 <sup>th</sup> Skin & Cosmeceuticals Congress		
8:55	<b>Global Engage - Welcome address and track chair opening remarks</b>		<b>Global Engage - Welcome address and track chair opening remarks</b>	
9:00 - 9:45	<p>Keynote Address:  <b>The Potential of Live Biotherapeutic Products to Optimize the Vaginal Microbiome to Improve Reproductive Health</b>                      Bacterial vaginosis (BV), a proinflammatory genital condition marked by high bacterial diversity and diminished Lactobacillus species, is linked with increased HIV transmission risks and preterm birth. BV is highly prevalent, with greater risk among African American and Hispanic women in the U.S. and in Africa. Antibiotic treatment of BV, though standard, faces high recurrence rates, possibly due to the inability to promote Lactobacillus growth. An innovative treatment strategy employing a live biotherapeutic Lactobacillus crispatus (LACTIN-V) has shown promise optimizing the vaginal microbiome, reducing recurrent BV, and mitigating the genital tract's inflammatory milieu, thus decreasing HIV susceptibility. Future studies are imperative to evaluate long-term BV treatments with live biotherapeutics that encourage colonization with H2O2-producing vaginal lactobacilli.</p> <p>Confirmed:  <b>Craig R. Cohen, Professor, Department of Obstetrics, Gynaecology &amp; Reproductive Sciences, University of California San Francisco</b></p>		<p><b>9.00 – 9.30</b>  <b>Skin Microbiome Case Study</b></p> <p>Reserved:  <b>Robert Brucker, Co-Founder and Chief Scientific Officer, Dermbiont</b></p> <p><b>9.30 – 9.55</b>  <b>Skin Microbiome Case Study</b></p> <p>Confirmed:  <b>Jennifer Cookson, Senior Director of Development, Arcaea</b></p>	
9:45 - 10:20	<p>Keynote Address:  <b>Microbiome Medicine: Combating Chronic Inflammatory Disease States</b>                      The gut microbiome's influence on the immune system is profound and far-reaching. The gut microbiota can modulate our immune responses, both in the gut and throughout the body. Incorporating the critical components of immune health, metabolic health, and the health of the microbiome is essential in preventing and combating chronic inflammatory disease states. The future of medicine is strongly related to the quality of our gut microbiome and has profound implications for disease prevention.</p> <p>Confirmed:  <b>Cassandra Isley, Chief Executive Officer, Microbiome Alliance for Disease Prevention</b></p>		<p><b>9.55 – 10.20</b>  <b>Skin Microbiome Case Study</b></p> <p>Confirmed:  <b>Nicole Scott, Founder &amp; CEO, Cybele</b></p>	
10:20 - 10:50	<p align="center"><b>30-Minute Solution Provider Presentation</b>                      (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a>)</p>		<p align="center"><b>30-Minute Solution Provider Presentation</b>                      (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a>)</p>	
10:50 - 11:40	<p align="center"><b>Morning Refreshments                      Poster Presentations                      One-to-One Partnering Meetings</b></p>			
	<b>Theme: Regulation and Manufacture</b>	<b>Theme: Urology &amp; Women's Health</b>	<b>Theme: Probiotics, Personalized Nutrition &amp; CardioMetabolic Diseases</b>	<b>Theme: Skin Microbiome &amp; Cosmeceuticals</b>
11:40 - 12:10	<p><b>30-Minute Solution Provider Presentation</b>                      (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a>)</p>	<p><b>30-Minute Solution Provider Presentation</b>                      (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a>)</p>	<p><b>30-Minute Solution Provider Presentation</b>                      (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a>)</p>	<p><b>30-Minute Solution Provider Presentation</b>                      (available – please contact <a href="mailto:gavin@globalengage.co.uk">gavin@globalengage.co.uk</a>)</p>

<p>12:10 - 12:35</p>	<p><b>Session Two - Cross-Event Poster Presentation Flash Presentations &amp; Start-Up Showcase Presentations</b></p> <p>Poster presenters and start-up companies will be provided with the opportunity to give a flash 3-minute overview of their work.</p>	<p><b>The Vaginal Microbiome &amp; DTC Women’s Health</b> The vaginal microbiome is a critical component of female health. More than 30% of people with vaginas suffer from imbalances in the microbiome (e.g. bacterial vaginosis, yeast infections, and recurrent UTIs) that drastically affect our quality of life. Additionally, research has uncovered groundbreaking links between the vaginal microbiome and infertility, HIV risk, preterm birth, gynecologic cancers, and more. Evvy’s longitudinal, metagenomic testing is unlocking personalized definitions of health and disease in the vagina — and providing women with education and insights about their vaginal health along the way. This talk will highlight how Evvy is leveraging the vaginal microbiome to positively impact women’s health outcomes.</p> <p>Confirmed: <b>Krystal Thomas-White, Senior Scientist Evvy</b></p>	<p><b>Tailoring the microbiota to the diet for targeted metabolite production</b> The diet provides a treasure trove of material for the production of bioactive metabolites. Many of these metabolites are generated by members of the microbiome. However, a lack of either the right diet or the right microbiome members can have a significant impact on the availability of health promoting metabolites in the body. Supplementation of probiotics that work synergistically with the diet to produce targeted metabolites through biotransformation, open up the opportunity to enrich the nutritional and health benefits of the diet.</p> <p>Confirmed: <b>Noah Zimmerman, Chief Technology Officer, Verb Biotics</b></p>	<p><b>Cross-Event Roundtables - Session Two</b> <i>Roundtables are informal, small-group interactive discussions on key topics in the field. Discussion leaders will introduce sub-topics/questions for discussion and roundtable attendees are encouraged to participate actively in the session.</i></p> <p><b>Roundtable 1 – How to speak about a microbiome: educational challenge in skincare industry</b> Confirmed: <b>Tiina Orasmäe-Meder, CEO and founder , Meder by Dr Tiina Meder</b></p> <p><b>Roundtable 2 – LBP Manufacturing TBC</b> Confirmed: <b>Sathya Janardhanan, VP, Manufacturing, Rise Therapeutics</b></p> <p><b>Roundtable 3 – TBC</b> <b>Cristina Llorente, Assistant Professor, Div. Gastroenterology, Dept. Medicine, UC San Diego</b></p> <p><b>Roundtable 4 - TBC</b> Confirmed: <b>Aubrey Levitt, CEO, Postbiotics Plus Research LLC</b></p>
<p>12:35 - 1.00</p>		<p><b>Factors Influencing the Vulva skin Microbiome and its Impact on Feminine Wellness</b> Abstract: A healthy vulvar microbiome is important part of feminine health. Disruption of the microbiome balance in the vulva can contribute to infection, discomfort, and irritation. Age, genetics, and health conditions can alter the vulvar microbiome. Herein, the effect of age, body mass index, and urinary incontinence have on the vulvar microbiome will be discussed. Furthermore, principles to support a healthy vulvar microbiome and importance of science informed guidelines for vulvar hygiene will be presented.</p> <p>Confirmed: <b>Rebecca Vongsa, Technical Leader, Life Sciences, Kimberly Clark Corporation</b></p>	<p><b>Regulatory Strategy for Next Generation Probiotics</b> Novel and next generation probiotics require “extra” regulatory know-how, concerning safety, categorization and strategic marketing.</p> <p>Confirmed: <b>Amy Smith, Director, Global Regulatory Affairs - Health, IFF</b></p>	
<p>1:00 - 2.00</p>	<p><b>Lunch</b> <b>One-to-One Partnering Meetings</b> <b>Poster presentations</b></p>			

2:00 - 2.25	<p><b>50min Panel Discussion - Current Challenges and Future Opportunities in LBP Manufacturing</b></p> <p><b>Key topics</b></p> <ul style="list-style-type: none"> <li>Identify and discuss the current major hurdles in LBP manufacturing, key pain points</li> <li>New analytical tools to support LBP characterization, release and stability</li> <li>Weigh the pros and cons of internal versus external manufacturing (single strain vs consortia, strict vs facultative aerobic, aerobes)</li> </ul> <p><b>Key questions</b></p> <ul style="list-style-type: none"> <li>What are the current major hurdles in LBP manufacturing? Are we still struggling with capacity and/or expertise</li> <li>What are the latest developments and most important advances in manufacturing of typical vs highly sensitive strains? <ul style="list-style-type: none"> <li>How can we leverage prior knowledge developing difficult to grow/scale strains</li> </ul> </li> </ul>	<p><b>Preclinical models for validation and quality control of electrospun fibers and 3D bio-printed scaffolds as vaginal therapeutic delivery platforms</b></p> <p>Current treatments for BV to restore a balanced vaginal microbiome rely on frequent user administration. There is a pressing need to quickly and more stably colonize the vagina with lactobacilli to avoid BV recurrence. Here, we validated a potential probiotic delivery device in our mouse model. <i>L. crispatus</i>-loaded fibers were placed into mouse vaginas with the goal of achieving colonization by <i>L. crispatus</i> without eliciting inflammation or injury. Our experiments show that vaginal colonization by <i>L. crispatus</i> can be achieved by incorporating polymers that sustain the release of live probiotics in the mouse vagina.</p> <p>Confirmed: <b>Amanda L. Lewis, Professor, Obstetrics, Gynecology, and Reproductive Sciences, UCSD</b></p>	<p><b>Metabolomic and microbiome investigations in a prebiotic resistant starch clinical trial reveal novel pathways influencing lipid metabolism</b></p> <p>Confirmed: <b>Jason Bush, Chief Scientific Officer, Solnul</b></p>	<p><b>The skin microbiome of preterm infants and impact of diaper change frequency</b></p> <p>Development of the cutaneous microbiome is important to overall health during the neonatal period and this may be especially true in preterm infants who are more susceptible to infection by opportunistic skin colonizers. In this study, we describe diversity and composition and evaluate the impact of diaper change frequency, clinical characteristics, and skin health metrics on the preterm infant skin microbiome. For diapered skin, diaper change frequency, diet, antibiotic exposure, and delivery mode were all associated with variation in microbiome composition. Microbiome diversity was inversely correlated with skin pH but not TEWL. Results presented here provide important insights into the drivers of microbiome development for preterm infants.</p> <p>Confirmed: <b>Josh Parris, Senior Scientist, Life Sciences, Kimberly Clark Corporation</b></p>
2.25 - 2.50	<ul style="list-style-type: none"> <li>Global regulatory convergence, What is the status of the Regulatory framework (US vs EU) for production and registration of LBPs?</li> <li>The potency of the product and its effect, are we still relying on CFU or something better?</li> <li>What are the main considerations regarding internal vs external manufacturing?</li> </ul> <p>Chair Confirmed: <b>Bharat Dixit, Chief Technology Officer, Adiso Therapeutics</b> <b>Paul Carlson, Principal Investigator, Laboratory of Mucosal Pathogens and Cellular Immunology, CBER, FDA</b> <b>Sathya Janardhanan, VP, Manufacturing, Rise Therapeutics</b> <b>Laurie Rey, Head of CDMO Business Development, Lallemand</b> <b>Senior Representative, Biocore</b> <b>Ryan Garrett, Head of Process Development, Vedanta Biosciences</b></p>	<p><b>Vaginal Microbiome Testing: Challenges and Opportunities</b></p> <p>As the role of vaginal microbiome testing in radically improving patient outcomes is increasingly recognized, we map the trajectory, challenges, and opportunities in this evolving field. Key challenges from clinical integration to variability of data for R&amp;D are weighed against the vast potential for personalized medicine and preventative care with real-world examples from Juno Bio's pioneering lab and customer base.</p> <p>Confirmed: <b>Hana Janebdar, Co-Founder &amp; CEO, Juno Bio</b></p>	<p><b>Probiotics, Personalized Nutrition Case Study</b></p> <p>Confirmed: <b>Se Jin Song, Director of Research, Applications for Microbiome Innovation, UCSD</b></p>	<p><b>Redox (Electrogenic) Bacteria as Biotherapeutics Against Oxidative Stress</b></p> <p>Reactive oxygen species (ROS), a subset of free radicals, have been implicated in many human diseases. Our results have demonstrated that carotenoid-carried skin and gut bacteria are electrogenic and can yield electricity to rescue the redox imbalance caused by oxidative stress. Taking skin electrogenic bacteria for instance, we found that topical application of <i>S. epidermidis</i> plus glycerol on dorsal skin of ICR mice significantly attenuated ultraviolet (UV)-elevated labile ferrous ions as well as 4-hydroxy-2-nonenal (4-HNE), a free radical marker derived from lipid peroxidation. Incubation of carotenoids enhances electricity production of <i>S. epidermidis</i>. Electrogenic bacteria hold great potential as new biotherapeutics for treatments of free radical associated human diseases.</p> <p>Confirmed: <b>Eric (Chun Ming) Huang, Professor, Arizona State University, USA</b></p>

2.50 - 3.15	<b>Regulatory Considerations for Microbiome Based Therapeutics</b> <ul style="list-style-type: none"> <li>An overview of CMC requirements for Live Biotherapeutic Products</li> <li>Discussion of assays for product characterization and release</li> <li>Presentation of proof of principle study assessing the use of MALDI-TOF for single strain enumeration from multi-strain mixtures</li> </ul> <p>Confirmed: <b>Paul Carlson, Principal Investigator, CBER, FDA</b></p>	<b>Womens's Health Case Study</b> <p>Reserved: <b>Oliver Worsley CEO &amp; Co-Founder, Sequential</b></p>	<b>Next generation probiotics for metabolic health</b> <p>Confirmed: <b>Johanna Maukonen, Director, Global Clinical Innovation &amp; Translation, IFF</b></p>	<b>Skin Microbiome Case Study – IP &amp; regulations</b> <p>Confirmed: <b>Jessica O'Connell, Partner, Covington &amp; Burling LLP</b></p>
3.15 - 3.40	<b>LBP Manufacturing Case Study</b> <p>Confirmed: <b>Sathya Janardhanan, VP, Manufacturing, Rise Therapeutics</b></p>	<b>Womens's Health Case Study</b> <p>Confirmed: <b>Laura Sycuro, Assistant Profesor, University of Calgary</b></p>	<b>Panel Discussion - Food vs. Pharma</b> <p><b>Chair</b> Confirmed: <b>Zac Lewis, Principal, Lewpine Consulting</b></p>	<b>Skin Microbiome Case Study</b> <p>Confirmed: <b>Angela Christiano, Professor of Genetics &amp; Development, Columbia University</b></p>
3.40 - 4.05	<b>Critical Considerations of a Successful Live Biotherapeutic Product</b> <p>Despite an abundance of academic research demonstrating the significance of the human microbiome on health, well being, and disease, converting this research into safe and efficacious FDA approved drugs has proved challenging. Over the past ten years, Vedanta has been a pioneer in applied science and CMC aspects of LBPs with internal development and manufacturing capabilities culminating in 32 strains produced for five clinical programs including late phase clinical trials. This internal development along with learnings from other companies in the field have revealed key attributes of LBPs that are necessary to maximize the chance of clinical success.</p> <p>Confirmed: <b>Ryan Garrett, Head of Process Development, Vedanta Biosciences</b></p>	<b>Deciphering and targeting the virome</b> <p>Confirmed: <b>Alex Sakatos, Co-Founder &amp; CEO, Ancilia Biosciences</b></p>	<b>Panelists</b> Confirmed: <b>Noah Zimmerman, Chief Technology Officer, Verb Biotics</b> <p><b>Amy Smith, Director, Global Regulatory Strategy Lead, IFF</b></p> <p><b>Denise Kelly, Investment Advisor, Seventure Partners</b></p> <p><b>Jonathan Scheiman, Founder &amp; CEO, FitBiomics</b></p>	<b>Skin Microbiome Case Study</b> <p>Reserved: <b>Ping Hu, R&amp;D Director, Principal Scientist, Research &amp; Development, Procter &amp; Gamble</b></p>
<b>Close of Conference</b>				