Global Engage

MICROBIOME & PROBIOTICS SERIES: USA

7TH MICROBIOME R&D & BUSINESS COLLABORATION FORUM
4TH PROBIOTICS & PREBIOTICS CONGRESS
PROBIOTIC & PREBIOTIC INGREDIENTS, FORMULATION & MANUFACTURING CONGRESS
SKIN MICROBIOME & COSMECEUTICALS CONGRESS

SAN DIEGO, USA
October 29-30, 2019

#MicrobiomeSeries

www.global-engage.com
Global Engage is pleased to announce the Microbiome & Probiotics Series: USA, due to be held on 29-30 October 2019. This world-renowned event brings together more than 400 industry, academic, and investment leaders to discuss cutting-edge microbiome and probiotics research, challenges and opportunities in moving research towards commercialisation, and potential partnerships and collaborations. This year, the Series will feature four innovative meetings:

- 7th Microbiome R&D & Business Collaboration Forum
- 4th Probiotics & Prebiotics Congress
- Probiotic & Prebiotic Ingredients, Formulation and Manufacturing Congress
- Skin Microbiome & Cosmeceuticals Congress

With an 100-strong speaker faculty, expert-led roundtables and interactive panel sessions, this year’s event promises to deliver ample content on the key challenges faced by both researchers and product developers, and the strategies that turn science into viable products with the backing of investors to fund the transition; and with over 7 hours of networking time, there will be numerous opportunities to showcase your work and to broaden your connections in this fast-growing field. The series is widely recognized for its comprehensive agenda and is gaining a fantastic reputation as the number one microbiome networking event. If you’re looking to learn more from the top scientists in the microbiome and probiotics space, to showcase exciting developments in your research, or to seek partnerships and funding within the industry, then this congress is not to be missed.
SPONSORSHIP & EXHIBITION OPPORTUNITIES AVAILABLE
For more details contact Gavin Hambrook: gavin@globalengage.co.uk or call +44 (0) 1865 849841
Composition of the microbiome
- Population-level variation
- Genetic determinants
- Early life & development
- Exploring the concept of enterotypes
- Understanding host-microbiota interactions
- Approaching consumers and consumer acceptance

Tools & techniques for studying the microbiome
- High-throughput culturing and other culturing methodologies
- Advances in sequencing method development
- Multi-omics approaches; genomics, metagenomics, metabolomics
- Bioinformatic tools; data analysis and integration
- Systems biology and modelling microbial communities

Translatable drug discovery
- Signatures for drug design
- Regulatory approaches to microbiome products
- Academic-industry collaborations
- Venture capital, investment and partnering
- IP protection

Gut microbiome in health and disease
- Metabolic functioning
- Autoimmune and inflammatory diseases
- Case studies such as obesity, diabetes, IBD, colitis
- The gut-brain axis and neurodegenerative disorders
- Fecal microbiota transplants (FMT)
- The human microbiome and cancer; microbiome therapeutics in immuno-oncology

Probiotics Discovery and Product Development
- Strain discovery
- Next generation microbial candidates
- Mechanisms of action
- Commercialisation strategies
- Marketing and consumer acceptance
- Case studies in digestive health, metabolic diseases, aging, skin health and allergy

Pediatrics and infant health
- The early life microbiome
- Breastfeeding and the milk microbiome (HMOs)
- Maternal-offspring exchanges and the effect of C-section delivery
- Early-life microbiome and the prevention/treatment of allergic diseases
- Antibiotics and the use of probiotics in early childhood

Prebiotics, Diet and Nutrition
- The role of diet in shaping the microbiome
- Personalized nutrition
- Sports nutrition and the microbiome
- Fiber deprivation
- The future of prebiotics
- Prebiotic interactions with the gut

Ingredient Innovation and Selection
- Identifying functional probiotics & developing innovative formulations
- Scientific substantiation/ regulatory compliance
- Consumer appeal - creating a brand with transparency and proven efficacy
- Start-up considerations

Suppliers and Distributor Partnering Considerations
- Considerations for selecting your partner and optimising partnerships & relationships
- Validating suppliers – Audits
- Internal resources v external partners
- Ensuring internal compliance

Manufacturing & Formulation
- Best practice techniques
- Formulating probiotics for maximum effectiveness / efficacy
- Novel formulation processes & considerations
- Quality Control / Quality Assurance - Regulatory compliance
- In vitro testing - Real time stability
- Delivery systems selection – bulk powder, capsules, tablets etc

Regulatory Affairs and Compliance
- Legal updates & IP protection
- Regulatory compliance & approaches for approval
- Audit preparation
- QC / QA

Packaging, Labelling & Supply Chain
- Regulatory considerations that influence permissible claims and labelling
- Formulation considerations for packaging
- Novel packaging design / technology/ sustainability
- Supply chain management
- Improving compliance, traceability, safety and quality
- Technology advancements

Skin disease & the microbiome
- Examining different skin sites and the aetiology of skin disorders
- The balance between commensals and pathogens
- Moving towards the molecular analysis of the skin microbiota; meta-omics approaches and sequencing
- Barrier integrity
- Wound healing
- Case studies such as atopic dermatitis, psoriasis, acne, allergy
- Microbiome-based therapies for skin ailments

Drug development strategy
- Candidate selection and target validation
- Safety & toxicology studies
- Model optimization
- Drug delivery methods
- Biomarker development
- Clinical trial strategy
- VC & investment
- Regulation

Cosmetics and Commercial Strategy
- Microbiome-based products
- Where the market is and where it’s going: the future of clean beauty
- Consumer awareness and expectations
- Best practices for commercialization
- Tackling the signs of aging using microbiome research
CONFIRMED SPEAKERS

MICROBIOME & PROBIOTICS SERIES: USA 2019
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<th>Name</th>
<th>Title</th>
<th>Organization/Institution</th>
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<td>Bruce German</td>
<td>Professor, Director, Foods and Health Institute</td>
<td>Department of Food Science &amp; Technology, UC Davis</td>
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<tr>
<td>David Kyle</td>
<td>Chairman and CSO</td>
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<tr>
<td>Dale Pfost</td>
<td>CEO</td>
<td>MicroBiome Therapeutics</td>
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<td>Jérémie Auger</td>
<td>Clinical bioinformatician</td>
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<td>Jonathan Scheiman</td>
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<td>Ralf Jaeger</td>
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<td>Johanna Maukonen</td>
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<td>Dupont</td>
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<td>John Leech</td>
<td>Postdoctoral Scholar</td>
<td>Scharschmidt Lab, UCSF</td>
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<td>Brynjulf Mortensen</td>
<td>Senior Clinical Development Scientist</td>
<td>Human Health Innovation, Chr Hansen A’S</td>
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<td>Azza Gadir</td>
<td>Director of R&amp;D</td>
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<td>Vandana Sharma</td>
<td>Principal Nutrition Scientist</td>
<td>Pharmavite</td>
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<td>Colleen Cutchiffe</td>
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<td>Jessica O’Connell</td>
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<td>Søren Kjærluff</td>
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<tr>
<td>Anand Kumar</td>
<td>Staff Scientist, Biosecurity and Public Health Group, Bioscience Division, Los Alamos National Laboratory</td>
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<td>Gregory Leyer</td>
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<td>CHAIN Biotech</td>
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<td>Alan Murray</td>
<td>CEO, GoodBelly/NextFoods</td>
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<td>David (Didi) Dabouis</td>
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<td>John Deaton</td>
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<td>Deerland Probiotics &amp; Enzymes</td>
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<tr>
<td>Michael Conlon</td>
<td>Senior Research Scientist</td>
<td>CSIRO Health &amp; Biosecurity, Australia</td>
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MAKING A POSTER PRESENTATION
Poster presentation sessions will take place in breaks and alongside the other breakout sessions of the conference. Your presentation will be displayed in a dedicated area, with the other accepted posters from industry and academic presenters. We also issue a poster eBook to all attendees with your full abstract in and can share your poster as a PDF after the meeting if you desire (optional). Whether looking for funding, employment opportunities or simply wanting to share your work with a like-minded and focused group, these are an excellent way to join the heart of this congress.

In order to present a poster at the congress you need to be registered as a delegate. Please note that there is limited space available and poster space is assigned on a first come first served basis (subject to checks and successful registration). We charge an admin fee of $100 to industry delegates to present, that goes towards the shared cost of providing the poster presentation area and display boards, guides etc. This fee is waived for those representing academic institutions and not for profit organisations.

POSTER COMPETITION – CLOSING DATE 27TH SEPTEMBER
1. Submit your entry prior to the closing deadline (1 entry per person)
2. Four entries for the Microbiome & Probiotics Series: USA will be selected by the judges
3. The winner of the poster presentation will be given a 15-minute speaking position on the conference agenda and will be notified in advance of the meeting
4. The judge(s) will make the decision based on the abstract(s) submitted
5. The winner will also receive a certificate from the organisers
6. Representatives from solution provider organisations or experts already speaking on the program are not eligible to enter the competition but are welcome to present posters at the meeting as normal

SUBMISSION INSTRUCTIONS
We will require the form (downloadable below) to be submitted by the 27th September to enter the competition. To simply have your poster at the meeting, submissions must be made no later than 11th October. This is the formal deadline however space is another limiting factor so early application is recommended. Therefore please contact us with any questions you have as soon as possible.
Keynote Address: Sandrine Miller-Montgomery
Executive Director, Center for Microbiome Innovation, University of California San Diego
Academia and Industry - How to successfully synergize the R and D from both microbiome worlds
- Microbiome Science is a multidisciplinary field for which a systematic approach is required. Silos need to be eliminated as much as possible while letting space to protected innovations
- To remain relevant Academia needs to ensure that research is done with an eye on the market while Industry needs to keep appraised on the latest credible sciences
- In a world where buzz word like Microbiome is creating the opportunity to see the rise of bad sciences or products, having a trusted meaningful collaboration is crucial and Academia-Industry partnership is more crucial than ever. We will present examples of such collaborations

Keynote Address: Bruce German
Professor, Director, Foods and Health Institute, Department of Food Science & Technology, UC Davis
Breastmilk and the feeding of the infant microbiome
- Milk is the product of millennia of co-evolution between a mammalian mother and her infant and a model for biological cost versus benefit. Oligosaccharides are a class of highly abundant and diverse sugar polymers in breastmilk. They are as abundant as proteins. Yet they pass through the infant. Why do mothers invest in undigestible matter? Suggestions that these oligosaccharides feed bacteria, are misleading. Intestinal bacteria have no means to liberate and metabolize all the sugars of human milk oligosaccharides. The strain Bifidobacteria longum subspecies infantis contains the genetic capabilities to disassemble and metabolize these oligosaccharides. Evolution has selected for a remarkable strategy. Mothers recruit a strain of bacteria to populate their baby's intestine and provide a selective food, complex oligosaccharides, to keep them and their baby 'happy'.

Keynote Address: Colleen Cutcliffe
CEO & Co-Founder, Pendulum Therapeutics
The Natural Symbiosis Between B. infantis and HMO Provides Colonization Protection for the Early Infant Gut
- Bifidobacteria longum subs. infantis historically dominated (80-90%) the infant gut microbiome worldwide. It can still be found in a few populations, but it is essentially gone from infants in the industrialized world.
- Clinical intervention trials have now Pendulum developed a live symbiotic formulation designed to restore functionalities missing in patients with metabolic syndrome
- Pendulum faced challenges unique to strict anaerobes: manufacturing, measuring viability, maintaining viability
- Pendulum conducted a placebo-

Keynote Address: Eric Huang
Chair Professor, National Central University Taiwan; Adjunct Professor, Department of Dermatology, University of California, San Diego, USA
Electro-biotic for Skin Microbiome Banking
Our lab has a Skin Probiotic Bank which allows us to screen bacteria specific (or precision) probiotic. Many electrogenic bacteria have been isolated from human skin. These bacteria generate electricity via prebiotic fermentation. Electron produced by these electrogenic skin
built a proprietary platform to enable the rapid and cost-efficient human-centric discovery and development of Microbiome Metabolic Therapies (MMT™) and its initial candidates are novel glycans. Kaleido utilizes its platform to study MMTs in microbiome samples in an ex vivo setting, followed by rapidly advancing candidates into human clinical evaluation. The Company is advancing a broad pipeline with the potential to address a variety of diseases and conditions with significant unmet patient needs.

established that the loss of this keystone commensal bacteria is associated with a loss colonization resistance early in life which results in chronic inflammation in the infant gut as early as 40 days after birth.
• Cytokines associated with this chronic inflammation are at levels that result in disruption of tight junctions in epithelia cell culture and this is occurring at a critical time in the development of the immune system which could lead to increasing prevalence of autoimmune disorders such as atopy, asthma and allergy.
• The good news is that this broken symbiosis is easily and quickly repaired by the reintroduction of B. infantis EVC001 to the breast-fed baby.

bacteria functions as antioxidants which can neutralize free radicals generated by UV skin damage. Electron released by electrogenic skin bacteria also exerts the activity to suppress the overgrowth of C. acnes, a opportunistic bacterium associated with acne vulgaris. An electronic skin patch has been developed to dynamically profile the skin microbiome in real time. The electronic skin microbiome profile can be used for development of personalized skin cares.

Medically relevant probiotics that have been clinically proven nowadays show an enormous impact on acute and chronic diseases like migraine, CDI, IBS, depression or the metabolic syndrome. Scientists expect that in the future no oncologic treatment will be accepted without using probiotics either to improve the effects of the treatment or to lower their side effects. But what will be really important to justify the use of probiotics in these severe illnesses is that there is evidence based research behind and that the highest quality standards are used in the production process of this new generation of probiotics. A challenge that has already been turned into reality.

Knowledge-driven analysis of compositional and functional skin microbiome data allows the identification of high-potential pre- and probiotics candidates.
• This in turn enables the design of clinical studies to support specific health (or should we say appearance / cosmetic benefits) benefits of these intervention targets.
• Primary outcomes can be chosen in a way that facilitates interpretation of trial results and communication to a broader audience.

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**ASUNCION MARTINEZ**
Director of Microbiology and Functional Screening, Seres Therapeutics

**Microbiome therapeutic design by Reverse Translation: Leveraging human interventional data to drive composition design**
New insights into the human microbiome are fundamentally reshaping how we understand and treat a wide range of diseases, creating new possibilities for patients not served by current approaches. Seres Therapeutics is a clinical biopharmaceutical company with a powerful Reverse Translation platform to leverage in human discovery for the development of Ecobiotic® drugs: rationally designed, fermented compositions that target functional deficiencies and reestablish keystone features of a healthy microbiome. This talk will illustrate Seres Reverse Translation approach by describing how key learnings from our SER-287 Ph1B clinical trial are being used to develop a designed Ecobiotic® to treat mild to moderate ulcerative colitis.

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**JOHANNA MAUKONEN**
Global Health & Nutrition Science Lead, DuPont Nutrition & Biosciences

**Optimising nutrition for pregnancy and early life development**
- Probiotics support women’s overall wellbeing during pregnancy with immune, mood and vaginal benefits
- Human milk oligosaccharides and probiotics offer a spectrum of important benefits to promote long-term health and wellness,
- These benefits include shaping the infant microbiome while providing building blocks for growth and development simultaneously supporting health

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**GRÉGORY LAMBERT**
CEO and VP of R&D, TargEDys

**ProbioSatys, Naturally modulating the appetite via the microbiome**
TargEDys is a French clinical stage biotech company aiming to control metabolic disease by modulating the appetite through an intervention on the microbiome. TargEDys’ innovative, satiety inducing technology (ProbioSatys®), is based on a unique understanding of appetite regulation by the microbiome at the molecular level. Bacteria can send signals of satiety to the brain from the gut by molecularly mimicking satiety hormones, thus activating natural satiety pathways. The basis of ProbioSatys® technology is a commensal, enterobacteria probiotic strain, Hafnia alvei, that produces the ClpB protein, a mimic of the satiety hormone α-MSH. This talk covers ProbioSatys® journey from its preclinical stage to the clinic and a commercialized product, EnteroSatys®, including formulation, manufacturing and control. First results of a consumer study will be presented and discussed.

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**ALEX GODDARD**
VP of Research and Development, AOBiome

**Digging in the Dirt for Our Missing Microbiome**
- Environmental microbes can influence the immune system
- Ammonia oxidizing bacteria are being developed to treat skin disease
- Treating bacteria as a therapeutic poses challenges

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**JAMES BURGESS**
VP of Innovation, Finch Therapeutics

**Human-First Discovery: A strategy for developing LBPs**
- Introduction and overview of Finch’s Human First Discovery strategy for developing LBPs
- Using clinical evidence to optimize PK/PD profiles of LBPs in the microbiome
- Strategies for product development in therapeutic areas with more limited clinical datasets

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**ROBERT BRUCKER**
Rowland Junior Fellow, MSI Faculty, Rowland Institute at Harvard University and Co-Founder & CSO, DermBiont

**DermBiont’s approach for identifying live therapeutics**
Looking to natural sources of microbial communities that have the capacity to reduce or prevent infections in otherwise normal patients. Live therapeutic antimicrobial products have potential as enduring, self-perpetuating, and highly localized treatments that decrease the need for multiple rounds of systemic small molecule antibiotics. DermBiont has developed the use of a living microbial competitor as an antimicrobial therapeutic to establish a persistent, healthy, microbial community.

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**JESSICA O’CONNELL**
Partner, Covington & Burling LLP

**Claim Development and Regulatory Considerations**
Provide an overview of fundamental principles of the development and substantiation of product marketing claims, including efficacy claims, sourcing claims (e.g., natural, “free of”), and consumer-driven claims. Identify key considerations from a regulatory perspective, including FDA, FTC, and state requirements, potential legal risks, and tools to help mitigate those risks.

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**TRAVIS WHITFILL**
Co-Founder, Azitra Inc.

**Engineering the microbiome to treat skin diseases**
- Novel strategies have emerged to harness the skin microbiome to treat a plethora of diseases.
- Azitra is developing a platform to treat atopic dermatitis and other skin diseases using protein-secreting S. epidermidis.
- The team has engineered these strains to secrete various human proteins and is developing AZT-01 (filaggrin-secreting strain) for atopic dermatitis, AZT-02 (LEKTI-secreting strain), and AZT-04 (non-secreting strain) for chemotherapy-induced rashes.
NUR A. HASAN  
CSO, CosmosID  
Accelerating Microbiome Discoveries using Shotgun Sequencing and Strain-Level Bioinformatics

Next-Generation Sequencing has revolutionized microbiological sciences by revealing that virtually all environments, including the human body, are teeming with diverse microbial communities. It has become evident that the human microbiota contributes biological functions that are essential to our wellbeing. Conversely, disrupting the healthy homeostasis of host and microbiome can lead to dysbiosis and has been implicated with many diseases and pathologies. As a consequence, research into the human microbiome is beginning to transform the healthcare landscape by providing novel nutritional and therapeutic approaches. In this seminar, we present an overview of different phases involved in the development of microbiome-based functional foods and therapies, including target discovery, pre-clinical and clinical research, production and quality assurance. We introduce common challenges specific to microbiome studies and we survey solutions along all phases of development using real-world examples.

JÉRÉMIE AUGER  
Clinical bioinformatician, Lallemand Health Solutions (LHS), Montréal

Microbiome data analysis in the era of Next-Generation Sequencing: a bioinformatician’s point of view of current strategies and challenges

With the advent of powerful tools such as Next-Generation Sequencing (NGS) technologies to investigate microbiota communities that live in and on humans (gut, skin, mouth, etc.), scientists are reporting on how microbes influence all aspects of human health (mental health, neurodegenerative disorders, IBD, etc.). However, the use of NGS technologies warrants the need for next-generation data analysis methods as the existing methods are not suited for the type of data being generated (very sparse and highly dimensional). The very nature of the gut

SENIOR REPRESENTATIVE  
Manda Fermentation  
Title TBC

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KIRK BEEBE  
Senior Director, Discovery and Translational Sciences, Metabolon  
Small Molecules at the Intersection of Health and Microbiota

The gastrointestinal tract of mammals is colonized by a complex microbial community. These intestinal microorganisms provide key functions including digestion and fermentation of non-digestible polysaccharides and proteins, modification of bile salt, synthesis of vitamins, stimulation of immune function, and prevention of colonization by exogenously introduced pathogens. As our understanding of the role of the microbiome increases, the potential for small molecules to modulate these functions and improve health becomes clear. In this seminar, we will discuss the latest advances in the development of small molecules that target the microbiome.

RALF JAEGGER  
Co-Founder and Managing Member, Increnovo LLC  
Probiotics may have beneficial effects in Parkinson’s disease: in vitro evidence

Parkinson’s disease (PD) is characterized by loss of dopaminergic neurons and intraneuronal accumulation of alpha-synuclein, both in the basal ganglia and in peripheral sites, such as the gut. Increasing evidence demonstrate a potential correlation between PD and intestinal microbiota. In this context, in vitro effects of probiotic bacterial strains in PBMCs isolated from PD patients versus healthy controls will be presented.

JACOB BAK HOLM  
Director of Scientific Operations, Clinical Microbiomics

Comprehensive analysis of the skin microbiome using shotgun metagenomics

Get insights to some of the newest tools available for analyzing the skin microbiome. At Clinical Microbiomics we offer full-service microbiome analysis of skin samples. This includes skin-dedicated metagenomics pipelines with optimized DNA extractions, shotgun sequencing, and data analysis to maximize data quality and insights to the skin microbiome. Shotgun metagenomics allows comprehensive analysis of both species composition and functional capability of the skin microbiome. Using SNV-based analysis we can furthermore identify and discriminate strain differences of e.g. Staphylococcus aureus and Cutibacterium acnes between healthy subjects and people suffering from conditions such as atopic dermatitis or acne vulgaris.
microorganisms. These microbes have co-evolved with us for thousands of years and are closely linked to many aspects of human health. But, in most cases, the complex influences of microbiota on our health are not yet functionally understood. Metabolites serve as a language that mediates cross-species relationships and Metabolon’s unbiased global metabolomics approach provides a great tool to decipher the complex biological story. This talk will cover how one can best leverage this technology to address their microbiome research questions as supported by case studies.

Discovery and development of rationally-selected consortia of live microbial biotherapeutics based on disease relevant mechanisms
Assembly Biosciences is engaged in discovery and development of oral live microbial biotherapeutic products that harness naturally-evolved functions of gut commensal bacteria to deliver clinical benefit in a wide variety of therapeutic areas. Our rationally-selected microbial consortia target diseases modulated by gut microbe-mediated pharmacological and biological mechanisms with systemic effects. Assembly has built a diverse library of bacterial strains isolated from carefully-screened healthy human subjects. Clonal bacteria and consortia are evaluated and selected using human cell-based functional assays and animal models reflecting immunological and cellular mechanisms fundamental to modulating disease biology. Detailed genetic and physiological evaluation of strains supports functional characterization, high-quality manufacturing and regulatory filing. Assembly has an ongoing Ph1b clinical trial of its lead investigational candidate, ABI-M201, in patients with mild-moderate ulcerative colitis.

Healthy controls has been evaluated. Preliminary results suggest that probiotics:
- Decrease pro-inflammatory cytokines with a concomitant increase of anti-inflammatory ones
- Restore intestinal membrane integrity
- Inhibit the most two common pathogens in Parkinson Disease comorbidities
- Do not possess Tyrosine Decarboxylase genes which inactivate levodopa bioavailability in PD patients

Microbiome Modulator A Case Study of a GI Microbiome Modulator
A collision might be developing over the coming years between the food and pharmaceutical industries’ notions of the microbiome and the resultant products. People in both industries see large prospects for breakthroughs. Perhaps lessons from each industry might apply to the other to ease the paths forward. How are the prospects different for probiotics vs prebiotics? The life-cycle of a GI microbiome modulator, BiomeBlissTM, developed by Assembly Biosciences has an ongoing Ph1b clinical trial of its lead investigational candidate, ABI-M201, in patients with mild-moderate ulcerative colitis.
PEDRO DIMITRIU
Research Associate, University of British Colombia

Biogeography of the relationship between the infant gut microbiome and innate immune system

Systemic innate immune responses to microbes differ between geographically distinct populations, but the potential role of the microbiome in mediating these responses is unexplored. We characterized the stool microbiome of 2-year-old Belgian, Canadian, Ecuadorian, and South African children using 16S amplicon sequencing, and profiled their whole blood cytokine responses to a panel of pattern recognition receptor agonists. We found strong correlations between responses to Toll-like receptor (TLR) 2 and relative abundances of Bacteroides and Prevotella among Belgian, Canadian, and Ecuadorian children. To test causality, we gavaged germ-free mice with stools from South African versus Canadian infants, finding their splenocyte responses to TLR stimulation were consistent with corresponding human donors. This study is the first to provide evidence of immune modulation by geographically distinct microbiomes.

JOHN LEECH
Postdoctoral Scholar, Scharsmidt Lab, UCSF

Neonatal priming shapes preferential capacity for immune tolerance to skin commensal vs. pathogenic bacteria

Life in a microbial world requires both tolerance to commensal microbes and protective responses to infectious pathogens. However, mechanisms enabling the host to establish a privileged relationship with commensals versus pathogens remain largely unknown. Colonization by a skin commensal Staphylococcus epidermidis in neonatal as compared to adult life preferentially facilitates antigen-specific immune tolerance. Here we demonstrate that this tolerance is not indiscriminately extended to all bacteria encountered in this early window. Rather, neonatal colonization by Staphylococcus aureus minimally enriches for antigen-specific regulatory T cells and does not protect against skin inflammation upon later life exposure. Our findings reveal a key role for both IL-1R signaling and S.aureus alpha toxin in enabling these distinct host responses. Thus, preferential activation of a key alarmin pathway facilitates early discrimination of microbial foe from friend, thereby preventing tolerance to pathogens during a key period of neonatal development.

GREGORY LEYER
CSO, UAS Labs

Probiotic Manufacturing Excellence

The probiotic industry must maintain consistent, high levels of quality to develop a product consumers can trust. Join Dr. Leyer as he discusses the best practices in probiotic manufacturing that lead to quality product. He will combine knowledge from UAS Labs’ role in the creation of IPA Best Practice Guidelines with personal experience obtained as the CSO of a vertically integrated company.

JOHN HALE
CTO, BLIS Technologies Ltd.

Development of a novel skin probiotic strain for human health applications

Blis Technologies (www.blis.co.nz) develops probiotics for applications outside the gut. Micrococcus luteus is a natural human skin commensal bacterium. Strain Q24 was isolated from the skin of a healthy human adult and was selected for assessment as a probiotic based on its enticing inhibitory capability against...
ADRIEN NIVOLIEZ  
CEO, Biose Industrie  
**Bugs as drugs and the complex CMC process**  
As we start moving forward into clinical trials with LBPs Biose Industrie has been at the centre of the development and scale up of both single and multi strain strict anaerobe projects. Here Dr Nivoliez explains some fundamental questions you need to ask yourself before beginning the CMC journey for Live Biotherapeutics.

MORTEN ISAKSEN  
CEO, Bio-Me AS  
**Rapid and high accuracy microbiome analysis**  
- The need and importance of accurate and reproducible microbiome analysis  
- Preliminary results of the first 1000 healthy samples from the HUNT population-wide biobank study  
- Examples of clinical applications of rapid microbiome analysis

JOHN DEATON  
Vice President of Science & Technology, Deerland Probiotics & Enzymes  
**Next-Generation Prebiotic Technology**  
Evidence has been mounting showing the value of prebiotics in supporting the structure and function of the microbiota, and the concept of symbiosis has been shown by researchers to be effective in creating, restoring and sustaining that beneficial balance. The scientists at Deerland Probiotics & Enzymes have developed a unique prebiotic bacteriophage blend that modulates the microbiota and begins to work within hours after ingestion. Dr. John Deaton will present the findings of a recently published clinical study which shows that the phage cocktail of PreforPro® supports gut microbiota proliferation and reduces other biochemical markers, strengthening the body of evidence to make a claim of symbiotic efficacy, and to promote growth of good bacteria.

For sponsorship opportunities contact Gavin Hambrook at: gavin@globalengage.co.uk

UAS Labs knows first-hand the struggles and successes that come with probiotic manufacturing excellence.

microbiome is known to modulate the intestinal endocannabinoid tone. Animal models show that psychoactive tetrahydrocannabinol alters the microbiome balance in obese mice significantly affecting the Firmicutes to Bacteroidetes ratio. Evidence suggests that a well-fed and functioning microbiome increases endocannabinoid tone and contributes to overall health. Clinical trial design in this space should include participants who follow a regular sleep pattern and eat healthy food and incorporates rigorous study designs that integrate participants’ endocannabinoid tone including their genetic profiles.

UAS Labs knows first-hand the struggles and successes that come with probiotic manufacturing excellence.

many important skin pathogens including Staphylococci, Propionibacterium acnes and Streptococcus pyogenes. Blis Technologies has selected this strain for development towards a commercial skin product. This talk will outline the work to date in the selection of this strain; characterisation of probiotic potential; formulation assessments leading to early proof of concept trial work.
Using the BioLector PRO platform for automated, high-throughput, fermentations (aerobic and anaerobic) to support microbiome screening and bioprocess development.

The BioLector PRO platform is a high-throughput fermentation platform that enhances bioprocess development and microbial screening efforts. The BioLector PRO, in conjunction with our microfluidic Flowerplates, allows researchers to scale-up bioprocess experiments with high efficiency and excellent data quality, at micro-scale costs. The BioLector PRO utilizes a shaken microtiter plate (MTP) impregnated with novel sensors and microfluidics, to provide high-throughput and real-time measurements of: dissolved oxygen, Biomass, pH and fluorescence. The combination of high-throughput and high information content makes the BioLector PRO platform an invaluable tool for any microbial or microbiome bioprocess development laboratory.

Effect of Novel Kiwifruit Powders on Bowel Regularity and Microbiome in Functionally Constipated Individuals

The kiwifruit is an iconic symbol of New Zealand and well-known for its benefits on bowel regularity. Both the green and gold varieties of kiwifruit have been the subject of a number of peer reviewed studies over the past four decades as safe and effective nutritional interventions for gastrointestinal health. Actazin™ and Livaux® are novel kiwifruit powders that support natural laxation and intestinal health through targeted prebiotic activity and a unique combination of bioactives. The synergistic effects of the active ingredients in Actazin™ and Livaux® on bowel regularity and changes in gut microbiome are being investigated in a large-scale, double-blind, placebo-controlled trials. Findings from the trial will be discussed as well as implications in the realm of selective prebiotics for targeted gut health solutions.

Preparing for IP Due Diligence in the Microbiome Space

As a valuable asset in the microbiome space, intellectual property will be scrutinized by potential business partners and investors. The types of issues that arise during intellectual property due diligence for microbiome innovators will sometimes resemble those in more traditional biopharma transactions, though complexities particular to microbiome products and platforms can also give rise to additional complexities from an intellectual property perspective. This talk will examine questions to expect during due diligence, and preparing...
20 MINUTE SPOTLIGHT SESSIONS: ROSS YOUNGS  
CEO, Biosortia  
Small Molecule Mining of Human Surrogate  
Microbiome for Therapeutics  
- Technological breakthroughs now allow obtaining natural microbiome and interrogating the actual hidden chemistry along with the genomics.  
- Current and advancing technologies simplify the mining of a complex mixture of signaling small molecules of the microbiome.  
- Direct and indirect support for therapeutic opportunities emerging from natural environmental microbiome habitats is evidenced by drugs on the market or 

20 MINUTE SPOTLIGHT SESSIONS: IRA SPECTOR  
CEO, SFA Therapeutics LLC  
Real Clinical Trial Data from the Microbiome  
Post-biotic or Bacterial Metabolite  
Small Molecule drugs offer a more rapid approach to clinical outcomes.

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<th>Time</th>
<th>Speaker</th>
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<tr>
<td>4:55-5:25</td>
<td>OLGA PARTINGTON</td>
<td>Counsel, Sterne, Kessler, Goldstein &amp; Fox</td>
<td>A robust and defensible patent estate can be the cornerstone of an innovative company’s value. As businesses operating in the microbiome space move more into mainstream commerce, a proactive approach to patent rights is imperative. Strategies for patent protection in this space can differ from the traditional small-molecule- and antibodies-based inventions. This roundtable will address the unique challenges and nuanced strategies associated with obtaining patent protection in the microbiome space. The discussion will also provide strategies for obtaining patent portfolios better positioned to withstand the scrutiny of inevitable post-issuance challenges.</td>
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| 5:25-5:45 | EDWARD GREEN | Chief Executive, CHAIN Biotech | Next Generation Live Biotherapeutics  
- CHAIN develops superior live biotherapeutic products based on Clostridia bacteria.  
- Our bacteria are precision engineered to produce specific therapeutic molecules in the human gut.  
- Our unique engineering capability supports a pipeline of therapeutic candidates addressing multiple disease areas associated with the human gut microbiome. |
| 5:45-6:05 | JACK OSWALD | CEO/CTO and Co-Founder, ISOThrive | Bacterially Produced Prebiotic Therapeutics – From Concept to Scaleup  
- Re-discovering a “missing link” prebiotic  
- Documenting efficacy  
- Scaling production |
| 5:55-6:25 | SKYLER STEIN | President, Gladskin USA | Treatment of inflammatory skin conditions with the first available endolysin based anti-S. aureus therapy  
Staphylococcus aureus has been implicated in many inflammatory skin conditions, including Eczema. Endolysins have demonstrated the ability to target S. Aureus while sparing other skin microbiome commensals, including S. epidermidis in vitro. No resistance to endolysins has been shown, nor is it expected given its unique mode of action. |

**Microbiome-oriented intellectual property portfolio for due diligence:**  
- Allocation of resources for patent portfolios: when to file, which countries to file in, and how aggressively to pursue rights  
- Ownership of intellectual property  
- The competitive landscape, and potential risks from third-party intellectual property  
- Avoiding common pitfalls

**20 MINUTE SPOTLIGHT SESSIONS:**

- **IRA SPECTOR**  
CEO, SFA Therapeutics LLC  
**Real Clinical Trial Data from the Microbiome**

- Post-biotic or Bacterial Metabolite  
Small Molecule drugs offer a more rapid approach to clinical outcomes.

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**Table 1: Protecting and Defending Inventions in the Microbiome Space: Challenges and Strategies**

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**Table 2: How will personalization & AI impact future probiotic & prebiotic development spanning pharma to CPG?**

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<tr>
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<tr>
<td>NOAH VOREADES</td>
<td>Consultant, GenBiome Consulting</td>
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- Discuss how personalization trends in the DTC testing and supplement markets are impacting traditional supplement sales models  
- Will consumer personalization trends influence how pharma/
Do all microbiome-based therapeutics need a pre-prescription diagnostic test to calibrate effectiveness?

Table 3: Does the key to preventing Food Allergy lie in the gut?

AZZA GADIR
Director of R&D, Seed Health

Food allergy as a breakdown in oral tolerance.
How microbes interact with the Immune System.
The potential for probiotics and microbe-derived metabolites as early-life interventions.

Table 4: Therapeutic gut microbiome modulation in IBD

THARAK RAO
Senior Vice President, Microbiome Clinical Development, Assembly Biosciences

Gut dysbiosis in IBD – cause or consequence?
Therapeutic manipulation of the gut microbiome in IBD: Current approaches
Putative mechanisms and drivers contributing to efficacy
Gut microbiome reconstitution versus selective reshaping?
Response prediction/Patient selection?
Other considerations, including diet and lifestyle?
Clinical trial design considerations to maximize clinical and mechanistic insights
Indication: Induction versus maintenance of remission?
Subject profile/selection: disease severity; concomitant medications?
Intervention: regimen and duration; antibiotic pre-treatment?
<table>
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<th>Time</th>
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<td>8:00-8:40</td>
<td>Refreshments</td>
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| 8:40-9:20 | **KEYNOTE ADDRESS:** GEORGE WEINSTOCK  
Evin Family Chair and Professor, Director, Microbial Genomics, The Jackson Laboratory for Genomic Medicine  
**Exploring the Medical Microbiome**  
The microbial communities of the human body not only affect their local environment but also remote sites, thought to be sterile, such as the brain. These communities are beneficial but can become pathogenic when deleterious microbial strains or unbalanced community structures appear. Analysis of these phenomena is advancing through the use of genetic, microbiological, and metabolomic approaches, often using model systems, such as the mouse. This is leading to new diagnostics, therapeutics, and preventive measures by novel microbiomic methods. |
| 8:40-9:20 | **KEYNOTE ADDRESS:** JEREMY BURTON  
Chair in Urological Sciences and Deputy Director of the Canadian Centre for Human Microbiome and Probiotics, Lawson Health Research Institute  
**The microbiome and urological health: A fast road to translation?**  
• The urological system has its own bacterial populations and while not as numerous as the intestinal tract still has a significant impact on health outcomes.  
• Bacteria can be detected all the way to the kidney and in found in kidney stones.  
• We need to consider their role in conditions beyond urinary tract infections such as over active bladder, kidney stones and cancer. |
| 8:40-9:20 | **KEYNOTE ADDRESS:** ALAN MURRAY  
CEO, GoodBelly/NextFoods  
**Clear Consumer Communication through all the Clutter**  
Consumers are flooded with information regarding the microbiome and probiotics. Some of it scientific, some of it pseudo-science. All of it confusing. This talk will explain how to pick a white space for your product concept and offer help in developing an engaging brand with a distinct personality. |
| 9:20-9:45 | **KEYNOTE ADDRESS:** SHAUNNA HUSTON  
Director of Programs and Business, International Microbiome Centre, University of Calgary  
**The Power of Communication, Collaboration and Partnerships in Addressing the Microbiome** |
| 9:20-9:45 | **JOHN HALE**  
CTO, BLIS Technologies Ltd  
**Probiotics for the oral cavity - The Blis story**  
Blis Technologies (www.blis.co.nz) develops probiotics for applications outside the gut. Our company was founded on the academic career of Professor Richard Blaser, and has since developed and commercialized a number of successful probiotic products. This talk will describe our approach to the oral cavity and the exciting products we are able to bring to market. |
| 9:20-9:45 | **DAVID (DIDI) DABOUSCH**  
CEO and Co-Founder, MyBiotics  
**Producing an industrial alternative to FMT**  
• About MyBiotics – MyBiotics Pharma is a microbiome company focusing on closing the clinical gap between beneficial |
| 9:20-9:45 | **APOSTOLOS PAPPAS**  
Head of Program, Nestlé Skin Health – SHIELD, Nestlé  
**Skin Microbiome: science of the 21st Century**  
• What do we need to learn in the future from the Skin Microbiome? Lessons learned from probiotic research during |
The International microbiome centre (IMC) has invested in research infrastructure and expertise to understand the mechanisms by which the microbiome affects health and its contribution to disease. IMC is a multi-disciplinary program with a one-stop-shop of technology platforms. The large-scale germ-free facility is specialized in re-derivation, breeding and experimentation of gnotobiotic animals and houses advanced technologies in intra-vital imaging to visualize immune cells and microbes within animals in real time, while maintaining gnotobiotic status. This environment combined with the ‘omics’ technologies, mass cytometry and bioinformatics is a unique resource for advancing microbiome research. A key component to IMC success is the power of communication, collaborations and partnerships with government, academics, industry and the community at large, for addressing the effects of the microbiome and translation of research.

Professor John Tagg who following his own encounter with strep throat as a child dedicated his career looking for natural ways to prevent this disease. This led to the identification of a commensal oral bacteria called Streptococcus salivarius with demonstrable unique anti-bacterial properties. Bils was formed to develop the technology to commercialise S. salivarius strains as orally-targeted probiotics overcoming many hurdles expected in the development of strain for a niche site. Development of S. salivarius has opened up a range of opportunities to support oral health conditions including, ENT infections halitosis, oral thrush, dental caries and periodontal health. The simple application of a S. salivarius probiotic-containing lozenge can promote homeostasis in the oral cavity. This talk will highlight the opportunities in developing a probiotic for the oral cavity.

bacteria and a clinical outcome. Using our technologies we can grow wide verity of bacterial combination with significantly better survival potentially better colonization. We developed our platform to enable better culturing, formulation and production and improved delivery and colonization

- in a competitive COGS and performance.
- About SuperDonor technology – the talk will focus on the SuperDonor technology and culturing concept. SuperDonor enable us to copy and manufacture the bacterial population in a selected biological sample. Using this technology we have been able to show very high similarity of our end product material compared to a human sample.
- Results and potential applications – This section will describe various tests and analysis profiles and also describe the potential of our technology in other areas in addition to the c.diff application.

20 MINUTE SPOTLIGHT SESSIONS: AUBREY LEVITT
CEO, Postbiotics+
Postbiotics, why we believe they are probiotics 2.0
- Our clinical research, from metabolites to gut modeling to in the clinics with patients
- What are postbiotics and why they are important
- How postbiotics enhance probiotics
- Why postbiotics have the potential to be utilized as adjunct therapies

2019 MICROBIOME & PROBIOTICS SERIES: USA 2019

The 20th century hold promises for the 21st century metagenomics research
- Why its scientific complexity is significant for conclusive remarks? The relationship of skin Microbiome to epithelial biology.
- What is the vision and outlook for the innovation to come within the 21st Century?
end of the day, they are focused on the commercialization of technology and return on investment. Let’s see what we can learn. Moderated by Malcolm Kendall, this will be a very interactive panel so have your questions ready for our venture capital experts.

20 MINUTE SPOTLIGHT SESSIONS: AFIF GHANNOUM
CEO, Biohm Health
The Role of Digestive Biofilms in the Microbiome, and the Opportunity for Probiotic Intervention
- Background on biofilms in the digestive tract
- The phenomena of multi-organism biofilms
- Potential therapeutic interventions

20 MINUTE SPOTLIGHT SESSIONS: AICACIA YOUNG
RDN - Director of Scientific Affairs, Microbiome Labs
Metabolic reprogramming: a microbiome-based weight loss solution
We all have that friend or family member that can eat virtually anything and not gain weight. We typically credit those features to the person having a “fast metabolism”. This implies that they simply burn more calories just walking around, sitting, sleeping, and doing daily activities. With the recent advancement in microbiology, we now have a different perspective on what controls body weight. This talk will focus on the latest research demonstrating the role that gut bacteria play in determining body composition and chronic disease risk as well as discuss strategies for modulating or reconditioning the gut microbiome in favor of a lean body and a healthy microbiome.

MARIE DRAGO
Founder, Gallinée
Scalp microbiome – How to formulate better haircare products
- Skin microbiome is the biggest trend in beauty, but what about the scalp microbiome?
- Still relatively unknown, it could lead to a new generation of products and a radical change in habits for customers.
- In this presentation, we will present what we currently understand on the scalp microbiome, and its consequences for the beauty industry.

STEPHANIE ROBERTSON
Senior Director, Scientific Innovation, Consumer, Johnson & Johnson
Clean beauty is on the rise as consumers seek products that are safe, non-toxic, ethically sourced and sustainable. There is a convergence between clean beauty and microbiome related skin products, driven by the microbiome's capacity to delivering ingredients that match clean beauty demands. We will explore how the microbiome and clean beauty are driving new skin health products and concepts, how they converge and the future of this convergence in the skin health space.

VANDANA SHARMA
Principal Nutrition Scientist, Pharmavite
- Impact of prebiotics on gut microbiome
- Prebiotics beyond Fiber
- Emergence of Synbiotics

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Peter Christey
CEO, General Automation Lab Technologies Inc.
A New Era in Microbiome Research: The Prospector™ High-throughput Microbial Cultivation System
Deep insights into microbiome structure and function are the foundation for microbial applications in agriculture, human health, environment and industry. Difficulty in cultivating isolates is often a barrier. The Prospector system, with its micro-fabricated
### Microbiome & Probiotics Series: USA 2019

#### Day 2 Wednesday October 30th 2019

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<th>Time</th>
<th>Session</th>
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<tr>
<td>12:25-12:55</td>
<td>Lunch / One-to-One Meetings</td>
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<tr>
<td>12:55-1:20</td>
<td>PAUL WARRENER, Scientist, AstraZeneca Unlocking the potential of the microbiome at AstraZeneca Overview of AstraZeneca’s approach to reverse translate observations from observational studies and clinical trials into mouse models to identify new biomarkers and drug targets to prevent, treat and cure disease.</td>
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<td>1:20-1:55</td>
<td>BEN GOODWIN, Co-Founder, Formulator, CEO, OLIPOP Bridging the Fiber Gap: Formulating for disruption and consumer engagement in the microbiome and digestive health space - <em>Fiber consumption has substantially declined from our ancestral hunter gatherer roots and this is leading to multiple negative impacts to our microbiome.</em> - <em>Consumer’s desire to increase fiber consumption must be approachable, fun, delicious, easy and affordable.</em> - <em>OLIPOP has formulated a category defining fiber, prebiotic and botanical beverage to support increased consumption and microbiome health.</em></td>
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<td>1:55-2:20</td>
<td>MICHAEL CONLON, Senior Research Scientist, CSIRO Health &amp; Biosecurity, Australia Opportunities for New Prebiotic Ingredients - <em>Prebiotics and probiotics are still largely based around the targeting or use of a narrow range of microbes, especially Lactobacillus and Bifidobacterium.</em> - <em>A growing understanding of the human gut microbiome and its role in nutrition and maintenance of health within the gut and throughout the body suggests there is great scope for modulating many types of bacteria not previously targeted in order to prevent or treat disease.</em> - <em>Examples will be given of how foods rich in fibres and polyphenols could be used as sources of prebiotics/gut microbiota modulators for use as supplements for human health.</em></td>
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<td>2:20-2:45</td>
<td>LARRY WEISS, CEO and Founder, Persona Biome Back to Health: What can we learn about health from the microbiome of hunter-gatherers? The emerging science of the microbiome is still in its infancy, yet it is the driving force behind a transformative scientific revolution. What lies ahead will have broad implications for us as scientists, our companies and academic institutions, our health, and perhaps for our survival. It is worth reflecting on where we are today, how we got here, what we have learned so far, and the limitations of our methods and of our vision. I will discuss what we are learning about our biological past by presenting our data on the microbiota of minimally impacted hunter-gatherers in the Amazon and how it is challenging our deeply held ideas about human health that may inform our path forward.</td>
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<td>2:45-3:10</td>
<td>LAUREN OLDFIELD, Assistant Professor, J. Craig Venter Institute The human microbiome and cancer: correlation, diagnostics, and potential therapeutics - <em>Overview of JCVI research into the relationship between the microbiome and cancer, including the diversity of the gut microbiome in acute lymphoblastic leukemia and examining the microbiome in oral cancers by metagenomics and proteomics.</em> - <em>Development of potential diagnostics, including identification of oral cancer biomarkers in saliva.</em> - <em>We have developed improved reverse genetic tools for viruses with large DNA</em></td>
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<td>3:10-3:35</td>
<td>JONATHAN SCHEIMAN, Co-Founder &amp; CEO, Fitbiotics Promoting Peak Performance: Identifying and Isolating Novel Probiotics from Athlete Microbiomes - <em>Demonstrating results of pre-clinical studies into a novel probiotic candidate that can break down lactic acid.</em> - <em>Providing evidence for athletes’ distinct microbial communities and the dynamic behavior of those communities during sports performance and recovery.</em> - <em>Learn how next-generation sequencing can identify novel probiotic species and strains</em></td>
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<td>3:35-4:00</td>
<td>ANAND KUMAR, Staff Scientist, Biosecurity and Public Health Group, Bioscience Division, Los Alamos National Laboratory Targeting Emerging Pathogen Infections with Next Generation Therapeutic Probiotics Conventional probiotics are handful in number without specific applications. Discovering next generation, smart probiotic with defined application from a complex microbiome is very challenging task. There exists no technology to screen microbiome for key microbes that brings about desired phenotype except mere modeling prediction. For this reason, we developed a novel and unique in vitro microbiome screening platform to discover*</td>
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<td>4:00-4:25</td>
<td>ELSA JUNGMAN, CEO and Founder, ELSI Skin Health Personalized skincare solutions for sensitive skin preserving the skin microbiome Skin health is affected by weather changes, toxic environment and products we apply on our skin every day. As a result, 50% of the U.S. population has now sensitive skin and dermatological conditions are exploding. In a context of lack of regulation and of an overwhelmed amount of skincare choices &amp; marketing claims, consumers are addressing their skin concerns by frantically multiplying tryouts. This leads to long term unbalanced skin and premature damages. Based upon ten years of dermatological research with...</td>
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| 2:20-2:45 | Microbiome and cancer immunotherapy- stinkin’ cool translational science | Christine Spencer, Research Scientist, PICI | - Parker institute microbiome initiatives  
- McGraw trial (a trial in melanoma patients currently open & collaboration with MDA & Seres)  
- Work looking at lifestyle & host factors in melanoma patients |
| 2:20-2:45 | Modulating the Human Vaginal Microbiome for Women’s Health | Peter Lee, Executive Chairman, Osel Inc. | The genitourinary (GU) tract is colonized with a robust microbiome that plays an important role in health and diseases. In healthy women, the vaginal microbiome is dominated by specific species of Lactobacillus, which produce lactic acid creating an acidic microenvironment that impedes growth of many pathogens. Disruption of the vaginal microbiome leads to common female infections, including bacterial vaginosis, recurrent urinary tract infections, and infertility. As such, restoration of the healthy vaginal microbiome could be an important adjunct or replacement for antimicrobial agents. Furthermore, the vaginal microbiome may be genetically modified to produce antibodies against sexually transmitted viruses. |
| 2:45-3:10 | New therapeutic opportunities | Brynjulf Mortensen, Senior Clinical Development Scientist, Human Health Innovation, Chr Hansen A/S | - Review and update the science of the innate immune system and commensal microorganisms  
- Clinical and regulatory update on our atopic dermatitis program  
- New therapeutic opportunities |
| 2:45-3:10 | Biologic for Acne | Noelle Patno, Digestive Health Nutritional Scientist, Metagenics Inc. | Launching a new product in a quick timeline and anticipating its success based on scientific merit requires key selection criteria for the ingredients. Product differentiators from scientific studies alone may be insufficient necessitating further development work prior to product formula finalization and final launch format. This presentation will focus on one or two examples in which critical aspects prior to launch were investigated and selected prior to finalizing the formula and clinical study design. |
| 2:45-3:10 | Review and update the science of the innate immune system | Mark Wilson, Co-Founder & CEO, MatriSys Bioscience Inc. | Review and update the science of the innate immune system and commensal microorganisms. |
| 3:10-3:35 | Work looking at lifestyle & host factors in melanoma patients | Emma Taylor, CEO & Co-Founder, Naked Biome | The human microbiome project has established the foundational science in defining healthy and diseased microbiomes in various skin conditions. The next challenge is to translate this science into viable therapeutic treatments for skin conditions such as acne and eczema. This talk details our journey in developing a topical live biologic therapeutic for acne from conceptual idea through proof of concept human clinical trials. |
Paradise Point Resort & Spa,
1404 Vacation Road, San Diego, CA 92109
www.paradisepoint.com

Paradise Point, San Diego's island resort, is a private 44-acre island tucked away on gentle Mission Bay, minutes from the heart of downtown San Diego and adjacent to the famous SeaWorld San Diego. This San Diego hotel located near SeaWorld features comfortable, California beach bungalow-style guest rooms amidst lush, tropical gardens and meandering lagoons. Perfect for families, weddings, groups and conferences, this Southern California resort features over 460 guestrooms, including everything from spacious suites to lanai patio and garden rooms. You're sure to relax comfortably in our tranquil bayside bungalows, featuring breezy patios with striking views.

Though the resort is home to an array of diverse dining options, Paradise Point's critically acclaimed restaurant Tidal is not to be missed. Perched above Mission Bay's shoreline, Tidal is where craft and catch converge in a thoughtful selection of local seafood, seasonal ingredients and craft beverages. The waterfront eatery has been named one of the top 10 restaurants in San Diego by Zagat and one of the top 100 in the U.S. by OpenTable.

This spa resort in San Diego also features the world-class, island-themed The Spa at Paradise Point, which offers massages and treatments for the body and face from the most exotic islands around the world, plus a salon and state-of-the-art fitness center.

There is a guaranteed rate at the venue available through Global Engage.