9TH MICROBIOME R&D & BUSINESS COLLABORATION CONGRESS: ASIA

5-6 MARCH 2025

WYNDHAM GRAND ZHAOQING DOWNTOWN

Organised by:

Global Engage

Co-hosted with:

瀚森投资集团
HANDSOME INVESTMENT GROUP

WWW.GLOBAL-ENGAGE.COM

Hello & Welcome

Welcome to Global Engage's inaugural microbiome event in China, **Microbiome R&D and Business Collaboration Congress**, taking place in-person on the 5th and 6th of March 2025 at Wyndham Grand Zhaoqing Downtown, Zhaoqing, China.

Co-hosted with the *Handsome Investment Group*, this edition is an excellent platform for researchers and product developers to gain knowledge and explore strategies to turn discoveries into products. It aims to connect the community with investors for commercialization support and provides networking opportunities.

Running on multiple tracks, this conference will showcase unique areas of scientific and business developments in the skin microbiome and microbiome spaces. Key thought leaders will share the latest cutting-edge research, emerging technologies, commercial interest, product development, and regulatory & claim considerations.

Attend this conference to learn from leading scientists, showcase research, and explore industry partnerships and funding. It is an event of utmost importance that you should not miss.

We look forward to seeing you in Zhaoqing, China!

With warm wishes,

Wen Fang Woo
Conference Producer - ASIA

About the Event

Conference synopsis

SKIN MICROBIOME

- Skin microbiome & cosmeceuticals
- Skin health, wellbeing, and microbiome-associated skin disease
- Regulatory landscapes & consumer insights
- Skin immunology
- Latest advances on mapping and profiling technologies
- Role of skin microbiome in precision health
- Aging
- Hair & scalp
- Wound healing

MICROBIOME

- Gut microbiome in health & disease
- Beyond gut & women's health
- Microbiome translational medicine
- Microbiome therapeutics & regulatory & commercialisation
- Microbiome & cancer
- Microbiome data & tools
- Microbiome & pro/pre/postbiotics
- Personalised nutrition and HMO & infant

Poster Presentations

Whether looking for funding, job opportunities or simply wanting to share your work with a like-minded and focused group, poster presentations are an excellent way to join the heart of the congress. Poster presentations are actively encouraged at this event and as such registered academic, industry, and start-up delegates are invited to present 1 poster each for free.

Poster competition
Six poster winners will each receive a cash prize worth USD 500. Two exceptional entries among the six will be selected for a 15-minute speaking position on the program.

Representatives from solution provider organisations or experts already speaking on the program are ineligible to enter the competition but are welcome to present posters at the meeting as normal.

Flash talks
Three 5-minute flash talks are allocated for industry and start-up companies to present an overview of their research poster.

Submission instruction
Poster competition/ presentation abstract submission deadline is on **27th January 2025**.
Download poster presentation/competition form **HERE**

Contact: **haley@global-engage.com** for more inquiries

About the Event

Registration:

To register, please visit our ***website*** or contact Dhevindran at: **Dhevin@global-engage.com**

Media Partners:

Official conference/hotel venue:

Wyndham Grand Zhaoqing Downtown
No.13, Xinghu Road, Duanzhou District,
Zhaoqing, Guangdong, China

肇庆市七星岩温德姆至尊酒店
中国广东省肇庆市端州区星湖大道五段13号

Our Speakers

MARC GÜELL
ICREA Research Professor, Pompeu Fabra University

QI SU
Assistant Professor (Research), Chinese University of Hong Kong

WEILIAN HUNG
Director of Probiotics Research Center, Yili Innovation Center

JODI WOAN-FEI LAW
Assistant Professor, University of Nottingham Ningbo

ANNALISA TERRANEGRA
Principal Investigator, Sidra Medicine

ALBERT DASHI
CSO & Co-Founder, Sequential

LARRY WEISS, M.D.
CEO, Symbiome

JOHN COMMON
Deputy Executive Director and Professor of Cutaneous Inflammation and Microbiome, A*STAR Skin Research Labs and Newcastle University

SIAM POPLUECHAI
Associate Professor, Mae Fah Luang University

ERIC HUANG CHUN-MING
Chief Scientific Advisor, Yunneng Biotechnology Co., Ltd

JINZHONG XIAO
Director/Professor, Morinaga Milk Industry Co., Ltd

AARTHI RAVIKRISHNAN
Scientist, Genome Institute of Singapore (GIS), A*STAR

MOHD HAFIZ ARZMI
Associate Professor, International Islamic University Malaysia

JIA XU
Senior Scientist II, Singapore Institute for Clinical Sciences, A*STAR

SANG SUN YOON
Professor and CEO, Yonsei University College of Medicine and BioMe Inc

TING FAN LEUNG
Professor, The Chinese University of Hong Kong

LOH TENG-HERN TAN
Assistant Professor, University of Nottingham Ningbo

XIAOQUAN SU
Professor, Qingdao University

JIYEON SI
Principal Investigator, Korea Institute of Science and Technology (KIST)

SEBASTIAN SCHIDMT
Principal Investigator, University College Cork

HONGWEI ZHOU
Director, Zhujiang Hospital

SENIOR REPRESENTATIVE
P&G

SENIOR REPRESENTATIVE
Danone

Agenda

Wednesday, Mar 5th, 2025

0800-0830 — **Registration & Morning Coffee**

0830-0835 — **Global Engage & Handsome Investment Group Welcome Address**

Chairperson:

0835-0905

Keynote Presentation

JOHN COMMON

Deputy Executive Director and Professor of Cutaneous Inflammation and Microbiome, A*STAR Skin Research Labs and Newcastle University

THE SKIN MICROBIOME IN CHRONIC INFLAMMATORY SKIN DISEASES

The skin is home to millions of bacteria, fungi and viruses that make up the complex communities of our skin microbiota. The composition of these microbial communities differ depending on biogeographical skin location and can remain stable for years. Technological advances in sequencing have allowed researchers to investigate resident microbial population at high resolution providing valuable insights into disease pathogenesis. These culture-independent investigations of the skin microbiome is revealing a much more complex picture of the contribution of species and stains to disease pathogenesis and severity. One of the largest disruptors of our skin microbiome is the occurrence of inflammatory skin diseases such as atopic dermatitis and ichthyosis. With atopic dermatitis being a disorder that effects 1 in 5 children, studies of the skin microbiome is particularly important when considering the paediatric phase of life. Recent studies are unraveling the mechanisms of host-microbe interplay at the skin barrier. Understanding the microbes and their collective contribution to skin health is important for the development of novel therapeutic approaches and interventions for improved relationships with our closest neighbours.

0905-0935

Keynote Presentation

INVITATION OUT

0935-1005

Solution Provider Presentation

For sponsorship opportunities, please contact **reuben@global-engage.com**

1005-1055 — **Morning Refreshments I Poster Presentations I 1-2-1 Meetings**

1055-1115

MICROBIOTA & SKIN DISEASE	MICROBIOME DATA & TOOLS
Chairperson:	**Chairperson:**
 **TING FAN LEUNG** **Professor, The Chinese University of Hong Kong** **TBD**	 **QI SU** **Assistant Professor (Research), The Chinese University of Hong Kong** **GUT MICROBIOME MEETS ARTIFICIAL INTELLIGENCE**

Agenda

Wednesday, Mar 5th, 2025

1055-1115

Artificial Intelligence (AI) is a powerful tool for gut microbiome. We explored the potential of AI with its application in the crosstalk between gut dysbiosis and Long COVID. We found that gut microbiome during the acute SARS-CoV-2 infection is related to the emergence of Long COVID after viral clearance, and based on this we built a regression model that predicts the length of the viral positive period, a binary model that predicts the risk of Long COVID, a multi-label model that predicts different symptoms, and a multi-class model that distinguishes Long COVID from common human diseases. Our series of studies revealed the significance of AI in understanding the role of gut microbiota in the pathogenesis, diagnosis and therapeutics of Long COVID and provided novel insights into the potential of gut microbiome-targeted applications for Long COVID in the post-COVID era.

1115-1135

MARC GÜELL

ICREA Research Professor, Pompeu Fabra University

MODULATING THE HOST SKIN USING THE SKIN MICROBIOME

We will present our advancements in transforming Cutibacterium acnes into a synthetic biology platform tailored for skin applications. Initially, our focus was on leveraging this bacterium to achieve sustained alterations in the skin's microbiome, utilizing natural variants. The stable environment of its natural habitat, the sebaceous appendices, provides a robust foundation for persistent bioengineering. Our efforts led to notable successful colonization and interesting therapeutic effects.

In recent years, our work has expanded to include the development of robust tools for the precise genetic manipulation of C. acnes. This includes a variety of synthetic biology components, circuit designs, and methodologies for genetic modification. Notably, we have developed several biocontainment approaches for controlled application of genetically altered bacteria. We have engineered and characterized the effectiveness of various synthetic functions, such as sebum regulation, immune system interaction, and sensing.

Our vision is to introduce new functions to human skin by engineering these endogenous microbes.

SEBASTIAN SCHIDMT

Principal Investigator, University College Cork

Agenda

Wednesday, Mar 5th, 2025

1135-1150

EARLY CAREER RESEARCHER

This session is allocated for early career researchers to showcase their research at this conference. Please contact wenfang@global-engage.com to submit your interest

EARLY CAREER RESEARCHER

AARTHI RAVIKRISHNAN

Scientist, Genome Institute of Singapore (GIS), A*STAR

GUT METAGENOMES OF ASIAN OCTOGENARIANS REVEAL MICROBIAL SPECIES PROMOTING HEALTHY AGING

While rapid demographic changes in Asia are driving the incidence of chronic diseases related to aging, the limited availability of high-quality in vivo data hampers our ability to understand complex multi-factorial contributions, including gut microbial, to healthy aging. Leveraging the availability of a well-phenotyped cohort of community-living octogenarians in Singapore, we used deep shotgun metagenomic sequencing to do high-resolution taxonomic and functional characterization of their gut microbiomes (n=234). Species-level analysis identified a distinct age-associated shift in Asian gut metagenomes, characterized by a reduction in microbial richness, and enrichment of specific Alistipes species (e.g. *Alistipes onderdonkii*). Functional pathway analysis confirmed that these changes correspond to a metabolic switch in aging from microbial guilds that typically produce butyrate in the gut (e.g. *Faecalibacterium prausnitzii*, *Roseburia inulinivorans*) to alternate pathways that utilize amino-acid precursors. Extending these observations to key clinical markers helped identify >15 robust gut microbial associations to cardiometabolic health, inflammation, and frailty, including potential probiotics such as *Parabacteroides goldsteinii* and pathogenic species such as *Dialister invisus*, highlighting the role of the microbiome as biomarkers and potential intervention targets for promoting healthy aging.

1150-1210

JODI WOAN-FEI LAW

Assistant Professor, University of Nottingham Ningbo

THE GUT-SKIN AXIS: GUT MICROBIOME CONNECTIONS TO ATOPIC DERMATITIS (ECZEMA)

Atopic dermatitis (AD) is the most prevalent chronic inflammatory skin disease that manifests early in life, impacting 15–30% of children and 10% of adults. AD typically starts in childhood, with 60% of patients <1 year of age developing the disease. Recent advancements in research have shed light on the intricate relationship between the gut microbiome and the development of AD, thus, elucidating the concept of the gut-skin axis. Infancy and childhood are critical periods for the development of the gut microbiome, which in turn influences

XIAOQUAN SU

Professor, Qingdao University

HOST-VARIABLE-EMBEDDING AUGMENTED MICROBIOME-BASED SIMULTANEOUS DETECTION OF MULTIPLE DISEASES BY DEEP LEARNING

Microbiome has emerged as a promising indicator or predictor of human diseases. However, previous studies have typically labeled each specimen as either healthy or with a specific disease, ignoring prevalence of complications or comorbidities in actual cohorts, which may confound the microbial-disease associations. Furthermore, host phenotypes like physiological characteristics and lifestyles can alter microbiome structure, but such information has not yet been fully utilized in

immune system maturation that shapes an individual's disposition to AD. This bidirectional communication highlights the dynamic complexity of the body's ecosystem, where perturbations in the gut microbiome can have profound implications on skin health and disease manifestation. This presentation delves into the burgeoning field of research investigating the relationships between the gut microbiome and AD, aiming to understand the underlying mechanisms and potential therapeutic avenues.

data models. To address these issues, a highly explainable deep learning (DL) method called Meta-Spec is proposed. Using a deep neural network (DNN)-based approach, it encodes and embeds refined host variables with microbiome features, enabling the detection of multiple diseases simultaneously. Experiments show that Meta-Spec outperforms regular machine learning (ML) strategies for multilabel disease screening in several cohorts. More importantly, Meta-Spec successfully detects comorbidities that are often missed by other approaches. Hence, these efforts improve the feasibility and sensitivity of microbiome-based disease screening in practical scenarios, representing a significant step toward personalized medicine and better health outcomes.

1210-1240

Solution Provider Presentation
For sponsorship opportunities, please contact **reuben@global-engage.com**

Solution Provider Presentation
For sponsorship opportunities, please contact **reuben@global-engage.com**

1240-1340

Lunch I Poster Presentations I 1-2-1 Meetings

WOMEN'S & INFANT HEALTH

Chairperson:

1340-1400

INVITATION OUT
For speaking opportunities, please contact Wen Fang at (***Wenfang@global-engage.com***)

1400-1420

JIA XU
Senior Scientist II, Singapore Institute for Clinical Sciences, A*STAR

THE HUMAN GUT MICROBIOME IN PREGNANCY AND EARLY LIFE: INSIGHTS FROM THE MULTI-ETHNIC ASIAN COHORTS GUSTO AND S-PRESTO

The gut microbiota plays pivotal roles in regulating host metabolism, immune response, and mental health. From birth, maternal microbes seed the neonatal gut, initiating the development of the infant's gut microbiota alongside physiological maturation. This process is foundational to long-term human health. Pregnancy and early infancy are critical periods characterized by rapid metabolic, physiological, and immunological changes, highly sensitive to both intrinsic and extrinsic factors. Understanding the development of the gut microbiome during these stages can enhance our knowledge of developing microbiome-targeted interventions to mitigate risks associated with

PROBIOTICS I PERSONALISED NUTRITION I HMO

Chairperson:

SIMON WANG *(Reserved)*
Probiotics Lead – Active Living, Fonterra Group

WEILIAN HUNG
Director of Probiotics Research Center, Yili Innovation Center

THE DEVELOPMENT AND APPLICATION OF NATIVE PROBIOTIC STRAINS IN CHINA

In recent years, the overall probiotic fever continues to intensify, and the global probiotic market is advancing steadily and rapidly. It is anticipated that the global market scale of probiotics will reach 111.5 billion US dollars by 2030. From the aspect of the regional market situation, the consumption scale of probiotics in the Asia-Pacific region holds the highest proportion in the world. The structure of the aging and the young has turned into the main potential battleground for the future development of probiotics in China. In response to the market and consumer demands, Yili Probiotic Research Center pools the strength from the upper, middle, and lower reaches of strain research and development, takes the

non-communicable diseases. In her presentation, Dr. Jia Xu will elucidate her recent findings on several key aspects of microbiome development:

- Changes in women's gut microbiome from preconception to post-delivery and its link with metabolic health;
- The colonization of gut microbiome in early life and how various intrinsic and early-life factors influence their acquisition;
- The effects of modern practices on the colonization of beneficial microbes in the infant gut

research and development of Chinese patented probiotics as the direction, and is dedicated to exploring probiotics that are more suitable for the Chinese people.

1420-1440

SENIOR REPRESENTATIVE
Danone

ANNALISA TERRANEGRA
Principal Investigator, Sidra Medicine

THE GUT MICROBIOTA AS BIOMARKER OF CLINICAL OUTCOMES IN THE CONTEXT OF TYPE 1 DIABETES

Type 1 diabetes (T1D) is one of the common pediatric diseases in Qatar. In a cross-sectional study of 102 pediatric T1D patients, we searched for potential microbial biomarkers of clinical outcomes and explored the role of diet in modulating the biomarkers. Briefly, the genus Akkermansia, a mucin-degrading bacterium, was significantly elevated in the Qatari patients with poorly controlled HbA1c levels (>7.5%) and consuming an Arabic diet. A distinct microbial signature has been associated with high blood pressure (BP>90th percentile), characterized by a reduced Bifidobacterium genus. An integrated analysis of the nutrient intake, gut microbiome, and blood transcriptome discriminated T1D-obese patients (BMI>95th percentile) from non-diabetic obese children. These findings show the strong potential of the gut microbiota as a biomarker of clinical outcomes and will pose the basis for microbiome-based therapies for T1D.

1440-1510

Solution Provider Presentation
For sponsorship opportunities, please contact **reuben@global-engage.com**

Solution Provider Presentation
For sponsorship opportunities, please contact **reuben@global-engage.com**

1510-1600

Afternoon Refreshments I Poster Presentations I 1-2-1 Meetings

Chairperson:

1600-1615

Flash Presentations
Three 5-minute flash talks are allocated for industry and start-up companies to present an overview of their research

Agenda

Wednesday, Mar 5th, 2025

1615-1700	***Panel Discussion*** **COMMERCIALISATION: SCIENCE VERSUS CONSUMERS** • Recent advances • Strategies for bringing products to market • Application and regulations • Consumer • Future direction
1705	**End of Day 1 I Dinner Reception** All delegates are welcome to join the dinner reception

Agenda

Thursday, Mar 6th, 2025

0800-0900 — **Registration & Morning Coffee**

SKIN MICROBIOME

Chairperson:

0900-0930

Keynote Presentation

INVITATION OUT

0930-1000

Keynote Presentation

LARRY WEISS, M.D.
CEO, Symbiome

BACK TO HEALTH - AN EVOLUTIONARY BIOLOGY PERSPECTIVE ON THE SKIN MICROBIOME

Major Points

- Metagenomics and metabolomics of the Yanomami skin microbiome.
- Functional anatomy of the ancestral skin microbiome.
- Translating the ancestral skin microbiome into safe and effective interventions.

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 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 from the microbiota of minimally impacted hunter-gatherers and how it challenges our deeply held ideas about human health that may inform our path forward.

1000-1030

Solution Provider Presentation

For sponsorship opportunities, please contact: **reuben@global-engage.com**

HUMAN MICROBIOME

Chairperson:

Keynote Presentation

HONGWEI ZHOU
Director, Zhujiang Hospital

Keynote Presentation

JINZHONG XIAO
Director and Professor, Morinaga Milk Industry Co., Ltd

NEW INSIGHTS INTO THE GUT-BRAIN AXIS: THE GREAT POTENTIAL OF *BIFIDOBACTERIUM BREVE* MCC1274 TO IMPROVE BRAIN FUNCTION

It is well known that the populations of major countries around the world are ageing. Cognitive decline is one of the biggest challenges facing the elderly. The global Alzheimer's population is expected to reach 130 million by 2050. Currently, Alzheimer's disease is prevention-oriented, and once it develops there is no cure yet. On the other hand, the relationship between the gut microbiota and health, referred to as the 'microbiota-gut-brain axis', has attracted much attention. In this context, we identified *Bifidobacterium breve* MCC1274 in our search for food ingredients that improve cognitive function, which has been shown to be effective in inhibiting cognitive decline and cerebral atrophy in animal models and clinical trials. This presentation describes the effects and mechanisms of action of *Bifidobacterium breve* MCC1274 in improving cognitive function from the gut to the brain.

Solution Provider Presentation

For sponsorship opportunities, please contact: **reuben@global-engage.com**

1030-1120 — **Morning Refreshments I Poster Presentations I 1-2-1 Meetings**

Agenda

Thursday, Mar 6th, 2025

COMPANY SPOTLIGHT

Chairperson:

1120-1140

SENIOR REPRESENTATIVE
Handsome investment Group

1140-1200

GRACE PARK *(Reserved)*
VP R&D, HelloBiome

REDEFINING SKIN TYPES THROUGH AI: MICROBIOME-BASED SEGMENTATION FOR PRODUCT INNOVATION AND PERSONALIZATION

The dynamic interplay between the skin microbiome and personal care products is multifaceted and intricate. While these products aim to cleanse, beautify, and protect, they can sometimes disturb the delicate balance of skin microbes, leading to dysbiosis. Recognizing the importance of the microbiome's influence on skin health, our study recruited 1000 participants who completed detailed skin and lifestyle questionnaires and collected skin microbiome samples at home. Through a comprehensive analysis, we observed distinct skin microbiome profiles, classifying various skin types into clusters based on their predominant microbial species, such as Cutibacterium, Corynebacterium, Staphylococcus, and Streptococcus. Our formulating strategy targeted these microorganisms linked to specific skin conditions within each cluster. Our method went beyond selecting active ingredients that modify microbial populations; we carefully adjusted product pH and moisture levels and chose suitable preservatives and ingredients, crafting bespoke solutions for each unique skin profile.

1200-1230

Solution Provider Presentation
For sponsorship opportunities, please contact: **reuben@global-engage.com**

1230-1250

ALBERT DASHI
CSO & Co-Founder, Sequential

MICROBIOME IN HEALTH AND DISEASE - GUT & BEYOND

Chairperson:

JIYEON SI
Principal Investigator, Korea Institute of Science and Technology (KIST)

TBD

MOHD HAFIZ ARZMI
Associate Professor, International Islamic University Malaysia

HARNESSING THE POWER OF BIOTICS: INNOVATIONS IN ORAL MICROBIOME MANAGEMENT FOR OPTIMAL HEALTH

Probiotics, prebiotics, and postbiotics are revolutionizing oral health care, offering cutting-edge solutions for preventing and managing oral diseases. Probiotics, composed of live beneficial bacteria, inhibit harmful pathogens, reducing incidences of dental caries, periodontitis, and halitosis. Prebiotics, non-digestible fibers, selectively nourish these beneficial bacteria, fostering a robust and balanced oral microbiome. Postbiotics, the metabolic byproducts of probiotics, exhibit powerful antimicrobial, anti-inflammatory, and immunomodulatory properties, further enhancing oral health. This triad of biotics not only disrupts pathogenic biofilms but also promotes oral tissue health and systemic immunity. The integration of these biotics into oral care products represents a paradigm shift towards natural, holistic, and effective dental therapies. At this congress, he will present the latest research, technological advancements, and potential applications of probiotics, prebiotics, and postbiotics, heralding a new era in oral health that is both scientifically groundbreaking and clinically transformative.

Solution Provider Presentation
For sponsorship opportunities, please contact: **reuben@global-engage.com**

SIAM POPLUECHAI
Associate Professor, Mae Fah Luang University

A TRADITIONAL THAI MEDICINE INTERVENTION FOR NCDS TARGETS GUT

Noncommunicable diseases (NCDs) are the primary cause of morbidity and mortality on a global scale. Globally, type 2 diabetes mellitus (T2DM) has emerged as a significant public health concern. In Thailand, patients with noncommunicable diseases (NCDs) frequently combine conventional medicine with traditional Thai medicine. Recent research suggests that metabolic disorders are influenced by the intestinal microbiota. Numerous studies have indicated that nutraceutical interventions that enhance the microbiota and induce clinical improvements in metabolic diseases have expanded significantly. Mathurameha (MT) is an oral dosage formulation that is utilized to treat patients with T2DM. It is composed of 26 medicinal plants. In this investigation, the gut microbiota, bioactive compounds, toxicity, and bioactivities of MT were investigated using multi-omics analysis. The LC-MS-qTOF analysis of MT revealed that the metabolites contain phenolic compounds and terpenoids. In vitro cell culture analysis demonstrated bioactive compounds showed α-glucosidase inhibition activity and stimulated the percent of glucose consumption. An investigation was conducted to examine the impact of MT on induced diabetic rats and patients with T2DM. The study revealed that MT intervention resulted in a significant reduction in blood glucose levels in both diabetic rats and T2DM patients, compared to the control group. In addition, MT interventions alter the composition of gut flora and fecal metabolites. The findings indicated that Mathurameha might help reduce blood glucose levels in T2DM through several mechanisms.

1250-1310

ERIC HUANG CHUN-MING
Chief Scientific Advisor, Yunneng Biotechnology Co., Ltd

SKIN S. EPIDERMIDIS, RIBOTYPES, PHENOTYPES AND BIO-ENGINEERING AS THERAPEUTICS

Different subtypes of *Staphylococcus epidermidis* (S. epidermidis) have been isolated from various resources in our laboratories. Ribotyping these S. epidermidis was conducted by deep learning neural network. Phenotyping these bacterial subspecies were achieved by biological assays in vitro and in vivo. Several SCFA-, carotenoids- and/or electrons-producing S. epidermidis was characterized. To non-genetically modify skin bacteria as bio-therapeutics, S. epidermidis bacteria were uploaded carotenoids (beta-carotene) on their membranes. Provision of external carotenoids to S. epidermidis substantially

Senior Representative (*Reserved*)
P&G

elevate the transcriptional expression of the NDH-2, and promote the electron production. Inoculation of carotenoid-laden bacteria onto the UV-irradiated mouse skin significantly diminished reactive oxygen species (ROS), demonstrating its beneficial effect on combating Redox imbalance. These carotenoids-laden S. epidermidis bacteria become new therapeutics for treatment of redox imbalance-associated human disorders such as cancer, aging, infection and inflammation.

1310-1410 **Lunch I Poster Presentations I 1-2-1 Meetings**

	HAIR & SCALP MICROBIOME I WOUND HEALING	MICROBIOME IN THERAPEUTICS DEVELOPMENT
	Chairperson:	**Chairperson:**
1410-1425	***Poster Winner Presentation*** Poster winners will receive a cash prize worth USD 500 and a 15-minute speaking position on the program (eligible for non-vendor authors and registered delegates only)	***Poster Winner Presentation*** Poster winners will receive a cash prize worth USD 500 and a 15-minute speaking position on the program (eligible for non-vendor authors and registered delegates only)
1425-1445	 **LOH TENG-HERN TAN** **Assistant Professor, University of Nottingham Ningbo** **INNOVATIVE WOUND DRESSINGS: USE OF PROBIOTICS FOR ENHANCED HEALING** The use of probiotics in wound dressings is emerging as a novel approach in the field of wound care. Probiotics, with their antimicrobial and anti-inflammatory properties, offer a unique advantage in promoting wound healing and preventing infections. This presentation delves into the development and application of probiotic-infused wound dressings, examining how these bioactive materials support the healing process. Key mechanisms include the suppression of pathogenic bacteria, enhancement of the skin's natural microbiome, and stimulation of tissue regeneration. Clinical trials and experimental studies demonstrating the effectiveness of probiotic dressings in accelerating wound closure and improving healing outcomes will be highlighted. This innovative approach has the potential to revolutionize wound care, offering a promising alternative to conventional treatments.	 **SANG SUN YOON** **Professor and CEO, Yonsei University College of Medicine and BioMe Inc** **GENETICALLY ENGINEERED BACTERIA FOR THE TREATMENT OF HYPERURICEMIA** Hyperuricemia (HUA), i.e. increased serum uric acid (UA) concentration, is a common problem in clinical practice. It is estimated to occur in approximately 8.9% to 24.4% of the general population. HUA causes gout and it also plays a role in the pathogenesis of chronic kidney disease, hypertension, cardiovascular disease and heart failure. Currently treatments of HUA is inadequate as small molecule drugs in treating gout have severe side effects. We aim to develop live bacterial therapeutics in the management of HUA. E. coli Nissel 1917 was engineered to overexpress a fungi uricase. Engineered bacteria showed activity in breaking down uric acid in vitro. Furthermore, protein structure directed mutations were made for the uricase to have stronger UA breaking activity. A xanthine oxidase gene knockout was also carried out to block UA formation in engineered strains. Strains with different combinations of mutant genes and knockout showed different degree of UA lowering activity in in vitro or in vivo assays. One strain was selected for further development as it strongly lowered blood uric acid level in huperuricemia model animals.

Agenda

Thursday, Mar 6th, 2025

1445-1505	**Senior Representative (*Reserved*)** **J&J**	 **YONG-LIANG ZHU** **CEO & Founder, PrecisionBio Inc** **GENETICALLY ENGINEERED BACTERIA FOR THE TREATMENT OF HYPERURICEMIA** Hyperuricemia (HUA), i.e. increased serum uric acid (UA) concentration, is a common problem in clinical practice. It is estimated to occur in approximately 8.9% to 24.4% of the general population. HUA causes gout and it also plays a role in the pathogenesis of chronic kidney disease, hypertension, cardiovascular disease and heart failure. Currently treatments of HUA is inadequate as small molecule drugs in treating gout have severe side effects. We aim to develop live bacterial therapeutics in the management of HUA. E. coli Nissel 1917 was engineered to overexpress a fungi uricase. Engineered bacteria showed activity in breaking down uric acid in vitro. Furthermore, protein structure directed mutations were made for the uricase to have stronger UA breaking activity. A xanthine oxidase gene knockout was also carried out to block UA formation in engineered strains. Strains with different combinations of mutant genes and knockout showed different degree of UA lowering activity in in vitro or in vivo assays. One strain was selected for further development as it strongly lowered blood uric acid level in huperuricemia model animals.
1505-1525	**Senior Representative (*Reserved*)** **Unilever**	 **YAN TAN** *(Reserved)* **CEO, XBiome**
1525	**End of Day 2**	

Post Conference Event

Tour to Songshan Lake Scipolis

Date: 7th MARCH 2025
Time: 8:00 - 12:00pm (half-day tour)
Transportation: Provided by organizer

Agenda

8:00 - 10:30 AM	Depart from Wydham Grand Downtown Zhaoqing hotel to Songshan Lake Scipolis
10:30 - 12:00 PM	Site visit and exchange session
12:00 - 14:00 PM	Lunch
14:00 - 16:30 PM	To Guangzhou Baiyun International Airport

A limited number of seats is available and they will be granted on a first-come-first-served basis.

Songshan Lake Scipolis is situated in the core area of the Dongguan Songshan Lake Biomedical Industry Base. The venue is affiliated with various service platforms, enterprise clusters, industry associations, and universities, as well as multiple provincial and municipal key laboratories and technical research centers. It offer a comprehensive integration of production, life, and ecology, providing a wide range of professional services for enterprises and institutions. These services include talent recruitment and training, finance and investment support, intellectual property protection, market channel development and achievement transformation. Additionally the venue can customize to high-standard industrial spaces to meet the specific needs of enterprises and institutions.

Additional Information

Transportation options:

By car/taxi from Guangzhou Baiyun International Airport ↔ hotel.
Taxis are abundant and easily accessible from the airport. It takes 1.5 hours to reach the hotel, with the cost ranging from approximately USD42 ~ USD55 per ride.

Car rentals - there are numerous rental car agencies throughout the region, with several located at the airport.

By metro/bullet train from Guangzhou Baiyun International Airport ↔ hotel
Disembark Guangzhou East Railway Station from airport T1 (Airport South Station) or T2 (Airport North Station) using metro line 3. The duration is about 37-min, with train interval of 7-min.

By taxi, the trip to Guangzhou East Railway Station takes about 40-min.

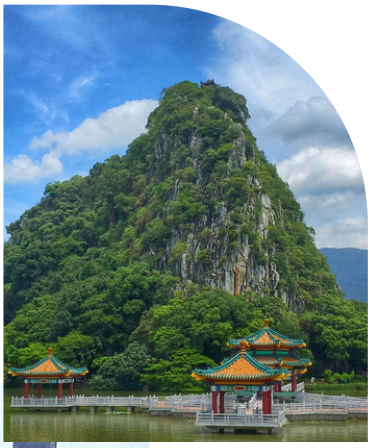
From Guangzhou East Railway Station, take a bullet train to Zhaoqing East Railway Station. This journey takes about 30 minutes. The hotel is 27 kilometers from Zhaoqing East Railway Station.

Shuttle Service:

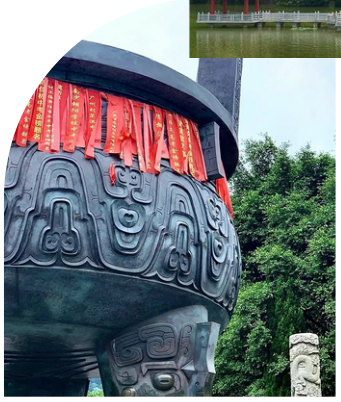
Shuttle bus will be provided from Guangzhou Baiyun International Airport to the conference hotel. The schedule will be provided closer to event date.

Discover Zhaoqing:

Zhaoqing located in the central-west part of Guangdong province, is one of the National Famous Historical and Cultural Cities and the Top Tourist Cities of China. Also known as the “capital of inkstones in China”, Zhaoqing is rich in tourism resources, where a long tourism corridor has been developed, with the Xinghu Scenic Area as the centre and numerous tourist attractions along Xijiang and Suijiang.



Admire the hundreds of Tang Dynasty inscriptions decorating the adjacent Seven Star Crags, check out the rare red-crowned cranes in Xingu Wetland Park, and see the spectacular waterfall and Buddhist temple of Qingyun on a hike at Dinghu Mountain.



Discover more

Additional Information

Visa application:

If you are attending from a country requiring a visa, please be sure to apply early and complete all required fields. Applications may be denied if necessary information is not included when submitted. We recommend applying for your visa as early as possible.

Learn more

Visa exemption program:

From March 14, 2024 to December 31, 2025, China has decided to implement a unilateral visa-free policy for ordinary passport holders from twelve countries: **Germany, France, Italy, the Netherlands, Spain, Malaysia, Switzerland, Ireland, Hungary, Austria, Belgium and Luxembourg**. Citizens holding ordinary passports from the above countries who come to China for business, tourism, family visit and transit purposes for no more than 15 days can enter China without a visa. However, it is advisable to confirm visa requirements with your local embassy. Individuals from the above-mentioned countries who do not meet the conditions for visa exemption still need to apply for a visa before entering China.

Learn more

Invitation letter:

Please contact **haley@global-engage.com** to request an invitation letter needed to begin your visa application process.

Global Engage

Upcoming Events | 2024-25

21-22 NOV

2nd Spatial Biology Congress Asia

LKC School of Medicine, NTU, Singapore
Co-hosted with Genome Institute of Singapore, A*STAR

10-11 APR

3rd Cell & Gene Therapy Research & Development Congress Asia

Singapore

8-9 MAY

9th Microbiome R&D and Business Collaboration Congress: Asia

Singapore

26-27 JUN

Spatial Biology Congress: CHINA

Guangzhou, China

10-11 JUL

2nd Single Cell Congress Asia

Hong Kong

For more information
www.global-engage.com