

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Manipulation of the Gut Microbiota for Metabolic Health (X3)

Scientific Organizers: Nathalie Delzenne and Liping Zhao

Supported by the Directors' Fund

Microbiome, Host Resistance and Diseases (X4)

Scientific Organizers: Wendy S. Garrett, Yasmine Belkaid and Janelle S. Ayres

March 4-8, 2018 • Fairmont Banff Springs • Banff, Alberta, Canada

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Abstract & Scholarship Deadline: / Abstract Deadline: / Discounted Registration Deadline:

SUNDAY, MARCH 4

Arrival and Registration

MONDAY, MARCH 5

Welcome and Keynote Address (Joint)

Stanley L. Hazen[†], Cleveland Clinic Foundation, USA
The Heart of the Matter: Dietary Metabolism and the Gut Microbiome in Health and Disease

Microbiota and Cardio-vascular-Metabolic Health (Joint)

Fredrik Bäckhed[†], University of Gothenburg, Sweden
Energy Metabolism: A Systems Biology Perspective for Goldilocks, The Three Bears and their Microbiota

Susan Joyce[†], University College Cork, Ireland
Bile Acids, Lactobacilli and Lipid Metabolism

Liping Zhao, Shanghai Jiao Tong University, China
Dietary Interventions, Microbiota Metabolism and Metabolic Syndrome

Short Talk(s) Chosen from Abstracts

The Gut Microbiome in the Control of Fat Metabolism (Joint)

Anna Mae Diehl[†], Duke University Medical Center, USA
Non-Alcoholic Fatty Liver Disease and the Microbiota

Mirko Trajkovski[†], University of Geneva - CMU, Switzerland
The Microbiota and the Browning of Adipose Tissue

Patrice D. Cani[†], Université Catholique de Louvain, Belgium
Endocannabinoids, the Gut Microbiome and Adiposity

Short Talk Chosen from Abstracts

Poster Session 1

TUESDAY, MARCH 6

Microbiota and Metabolic Disorders in Undernutrition (X3)

François Leulier[†], Institut de Génomique Fonctionnelle de Lyon, France

Gut Microbiome and Muscle Axis in Growth

Marc Charbonneau[†], Center for Genome Sciences and Systems Biology, USA

Microbiome and Infant Undernutrition

Laure Bindels[†], Université Catholique de Louvain, Belgium
Microbiota and Undernutrition Related to Cancer Cachexia

Eran Elinav[†], Weizmann Institute of Science, Israel
Immune Disorders, Microbiome and Malnutrition in Early Life

Short Talk(s) Chosen from Abstracts

The Microbiota of Early Life and Developmental Immunology (X4)

Maria G. Dominguez-Bello[†], New York University, USA
Early Microbial Environments and Health

Andrew J.S. Macpherson[†], University of Bern, Switzerland
The Maternal Microbiota and Early Postnatal Innate Immune Development

Gregory M. Barton[†], University of California, Berkeley, USA
The Microbiota, Immune Development and T Cell Responses in Early Life

Michael D. Rosenblum[†], University of California, San Francisco, USA
Neonatal Encounters with Skin Microbes

Short Talk(s) Chosen from Abstracts

Workshop: Discovery, Translation and Commercialization in Microbiome Research and Development: Opportunities and Challenges (X4)

David Cook[†], Seres Therapeutics, USA

Henry J. Haider[†], Novartis Institute for Biomedical Research, USA

Thomas Gajewski[†], University of Chicago, USA

Maria G. Dominguez-Bello[†], New York University, USA

Gut Barrier Alterations and Host Metabolic Disorders (X3)

Lora V. Hooper[†], University of Texas Southwestern Medical Center, USA

Targeting the Gut Immune System

Philippe Langella[†], Institut National de la Recherche Agronomique, France

Microbial Bioactive Metabolites and Gut Function

Michiel Kleerebezem[†], Wageningen University, Netherlands
Small Intestine Integrity and Host Metabolism

Short Talk Chosen from Abstracts

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Mechanistic Microbiome Function in Physiology and Aging (X4)

Paul O'Toole[†], University College Cork, Ireland
Microbiome, Nutrition and the Elderly

Vishwa Deep Dixit[†], Yale University, USA
Dietary Restriction, Immunity and Aging

Sarkis K. Mazmanian[†], California Institute of Technology, USA
The Microbiome in Neurodegenerative Disease
Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, MARCH 7

Feeding the Gut Microbiota for Health (X3)

Jens Walter[†], University of Alberta, Canada
Eating Mucus or Eating Prebiotic Fibers: How Do Bugs Choose?

Harry Flint[†], University of Aberdeen, UK
Short Chain Fatty Acids Profiling by Dietary Carbohydrates

André Marette[†], Laval University Hospital Research Center, Canada
Dietary Polyphenols - Microbiome Interactions

Maria Carmen Collado[†], Institute of Agrochemistry and Food Technology-Spanish National Research Council, Spain
Perinatal Nutrition: The Role of Prebiotic and Probiotic Approaches
Short Talk(s) Chosen from Abstracts

The Microbiota and Resistance to Infectious Diseases (X4)

Sara R. Cherry[†], University of Pennsylvania School of Medicine, USA
*The Microbiota and Viral Resistance in *Drosophila**

Howard C. Hang[†], Rockefeller University, USA
Elucidating Microbial Mechanisms for Host Protection from Bacterial Pathogens

Justin L. Sonnenburg[†], Stanford University, USA
Microbiota and Resistance to Enteric Pathogens

Ken H. Cadwell[†], New York University School of Medicine, USA
Helminths, the Microbiome and Colonization Resistance
Short Talk(s) Chosen from Abstracts

Disease Tolerance, Pathology, and the Microbiome (X4)

Yasmine Belkaid, NIAID, National Institutes of Health, USA
Bacterial Infectious, Scarring and Adipose Pathology

Janelle S. Ayres, The Salk Institute for Biological Studies, USA
Muscle Wasting, the Microbiota and Defense Against Bacterial Infections

Denise M. Monack[†], Stanford University, USA
*Microbiota Regulation of *Salmonella* Persistent and Disease Tolerance*
Short Talk Chosen from Abstracts

Xenobiotics-Microbiota Interactions in Metabolic Diseases (X3)

Frederik-Jan Van Schooten[†], Maastricht University, Netherlands
Gaz Production by Microbiota: Biomarkers or Actors?

Julia Goodrich[†], Cornell University, USA
Food Additives and Contaminants Acting on the Gut Microbiota

Oluf Pedersen[†], University of Copenhagen, Denmark
Drug-Microbiome Interactions in Metabolic Diseases
Short Talk Chosen from Abstracts

Poster Session 3

THURSDAY, MARCH 8

Dealing with Microbiome Complexity (X3)

Ruth E. Ley[†], Max Planck Institute for Developmental Biology, Germany
Host Genome and Microbiome Working Together

Natalia Shulzhenko[†], Oregon State University, USA
Microbial Networking

Peter J. Turnbaugh[†], University of California, San Francisco, USA
Genome Editing for Microbiome

Colin Hill[†], University College Cork, Ireland
Phage Therapy

Short Talk(s) Chosen from Abstracts

Cancer, Metabolism, and the Microbiome (X4)

Herbert Tilg[†], Medical University Innsbruck, Austria
Microbial Siderophores, Inflammation and Cancer

Wendy S. Garrett, Harvard School of Public Health, USA
Microbial Metabolism and Colorectal Carcinogenesis

Melek Canan Arkan[†], Technical University of Munich, Germany
Inflammation, Fatty Acid Oxidation, the Microbiome and Cancer

Ravid Straussman[†], Weizmann Institute of Science, Israel
Cancer, Chemoresistance and the Microbiome (Meta)bolism
Short Talk(s) Chosen from Abstracts

Faculty and Industry Working Together for Innovation (X3)

David Cook[†], Seres Therapeutics, USA
Bugs as Drugs

Henry J. Haiser[†], Novartis Institute for BioMedical Research, USA
Innovation in Cardiometabolic Health

Joël Doré[†], INRA / MetaGenoPolis, France
Recapitulating Microbial Diversity by Innovative Approaches

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Nathalie Delzenne, Université Catholique de Louvain, Belgium
Food Industries - Academic Partnership

The Microbiota in Cancer Treatment Toxicities and Immune Response (X4)

Matthew R. Redinbo[†], University of North Carolina at Chapel Hill, USA

Alleviating Cancer Drug Toxicity via the Microbiota

Eric G. Pamer[†], Memorial Sloan Kettering Cancer Center, USA

Infectious Complications, Cancer and the Microbiota

Thomas Gajewski[†], University of Chicago, USA

Anticancer Immune Responses and the Microbiome

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)
(X3)

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)
(X4)

FRIDAY, MARCH 9

Departure