A Gut-Systemic Perspective for Metabolic Disease (C3)
March 22-26, 2020 • Eldorado Hotel & Spa • Santa Fe, NM, USA
Scientific Organizers: Tony K.T. Lam, Nancy A. Thornberry and Fredrik Bäckhed
Sponsored by AstraZeneca

Discounted Abstract & Scholarship Deadline: November 19, 2019 / Abstract Deadline: December 12, 2019 / Discounted Registration Deadline: January 21, 2020

SUNDAY, MARCH 22
Arrival and Registration

MONDAY, MARCH 23
Welcome and Keynote Address
*Tony K.T. Lam, Toronto General Research Institute, Canada
*Fredrik Bäckhed, University of Gothenburg, Sweden
*Nancy A. Thornberry, Kallyope, Inc., USA
Ronald M. Evans, HHMI/The Salk Institute, USA
Intestinal FXR as a Potent Regulator of Body Metabolism and Disease

Gut Nutrient Sensing
*Suzanne Devkota, Cedars-Sinai Medical Center, USA
*Patrice D. Cani, Université Catholique de Louvain, Belgium
Fiona M. Gribble, University of Cambridge, UK
Nutrient Sensing and Gut-Peptide Secretory Cells
Eran Elinav, Weizmann Institute of Science, Israel
Host Microbiome Interactions in Health and Disease
Gilles Mithieux, INSERM, France
Metabolic Effects of Intestinal Gluconeogenesis from Luminal Metabolites
Hwei-Ee Tan, Columbia University, USA
Short Talk: The Neural Basis of Sugar Preference
Mitchell Tyler Lavarias, University of Wisconsin - Madison, USA
Short Talk: Intestinal Fatty Acid Oxidation Regulates Systemic Nutrient Availability

Poster Session 1

Hot Topics I
*Christopher B. Newgard, Duke University Medical Center, USA
*Frank A. Duca, University of Arizona, USA
Louise Schjellerup Dalbøge, Gubra, Denmark
Identification of Gut-Derived LEAP2 as a Novel Insulin Secretagogue
Clara Depommier, Université catholique de Louvain, Belgium
Pasteurized Akkermansia Muciniphila Modulates Whole-Body Energy Metabolism in Diet-Induced Obese Mice: New Insights from Indirect Calorimetry
Tyler Cook, Loyola University Chicago, USA
The Gut-Derived Metabolite Propionate Regulates Glucose Homeostasis and Energy Balance Potentially through Vagal Mechanism
Ting Fu, The Salk Institute, USA
Novel Microbial Conjugated Bile Acids Enriched in Colon Cancer that Stimulates FXR

Gut Microbiota Metabolite Interaction
*Kristina Schoonjans, École Polytechnique Fédérale de Lausanne – EPFL, Switzerland
*Federico E. Rey, University of Wisconsin–Madison, USA
Christopher B. Newgard, Duke University Medical Center, USA
Branched Chain Amino Acids and Cardiometabolic Disease Mechanisms

Fredrik Bäckhed, University of Gothenburg, Sweden
Microbial Production of Amino Acid Derived Metabolites and Impact on Host Metabolism
Elaine Y. Hsiao, University of California, Los Angeles, USA
Microbiota-Diet Interactions in Refractory Epilepsy
Lucas Osborn, Cleveland Clinic Foundation, USA
Short Talk: Fruits, Vegetables, and Fatty Liver Disease: A Gut Microbial Metabolite Perspective
Jennifer Lee, Harvard Medical School, USA
Short Talk: Anti-Diabetic Effects of Palmitic Acid Hydroxy Stearic Acids (PAHSAs) are Transmissible by Fecal Microbiota Transplantation (FMT) in Mice

TUESDAY, MARCH 24

A Regulatory Role of Bile Acid-FXR and Gut-Brain Axis
*Elaine Y. Hsiao, University of California, Los Angeles, USA
*Gary F. Lewis, Toronto General Hospital, Canada
Kristina Schoonjans, École Polytechnique Fédérale de Lausanne – EPFL, Switzerland
Emerging Roles of Bile Acid Signaling in Metabolism and Stemness
Changtao Jiang, Peking University Health Science Center, China
HIF-2alpha-Commensal Interactions Regulate Obesity through Bile Acid-TGR5 Axis
Karine Clément, INSERM / Sorbonne Université, France
Changes in Gut Inflammation Regulate Metabolic Homeostasis in Humans
Suzanne Devkota, Cedars-Sinai Medical Center, USA
Role of the Gut Microbiome in the Nutrient Stress-FGF21 Axis
Song-Yang Zhang, University Health Network, Canada
Short Talk: The Gut Microbiome and Brain Insulin Action
Christina Nadine Heiss, University of Gothenburg, Sweden
Short Talk: The Gut Microbiota Regulates Hypothalamic Inflammation and Leptin Sensitivity in Western Diet-Fed Mice via a GLP-1 Receptor-Dependent Mechanism
Sei Higuchi, Columbia University, USA
Short Talk: Bile Acid Composition Regulates GPR119-Dependent Intestinal Lipid Sensing and Food Intake Regulation in Mice

Gut Microbiota, Small Molecules, Genetics, and Gut-Brain Axis (Hot Topics)
*Fiona M. Gribble, University of Cambridge, UK
Noah W. Palm, Yale University, USA
Illuminating the 'Dark Matter' of the Gut Microbiota Metabolome
Michael A. Fischbach, Stanford University, USA
Small Molecules from the Human Microbiota
J. Nicholas Betley, University of Pennsylvania, USA
A Gut-Brain Axis in Regulating Hunger and Pain
Takumi Kitamoto, Columbia University, USA
Short Talk: An Orally Administered FoxO1 Inhibitor to Induce Conversion of Enteroendocrine Cells into beta-like, Insulin–Producing Cells
Fernando Anhe, McMaster University, Canada
Short Talk: Metabolic Endotoxemia and Insulin Resistance Are Dictated by the Type of Bacterial Lipopolysaccharides

Poster Session 2

WEDNESDAY, MARCH 25

Gut-Brain Axis
*Nancy A. Thornberry, Kallyope, Inc., USA
*Gilles Mithieux, INSERM, France
Paul Richards, Kallyo, USA
Systems Biology Approach to the Study of the Gut-Brain Axis
Ivan E. de Araujo, Icahn School of Medicine at Mount Sinai, USA
Reward, Aversion and the Gut-Brain Axis
Zachary A. Knight, University of California, San Francisco, USA
The Neurobiology of Homeostasis
Savanna Weninger, University of Arizona, USA
Short Talk: Oligofructose Alters Small Intestinal Microbiota to Improve Intestinal Nutrient-Sensing Mechanisms
Madina Makhmutova, University of Miami, USA
Short Talk: Vagus Nerve Mediates Islet-Brain Communication
Klylynda C. Bauer, University of British Columbia, Canada
Short Talk: Microbes, Malnutrition, and Gut-Systemic Metabolism: From NAFLD to Neurocognitive Function
Jordan B. Wean, University of Kentucky, USA
Short Talk: FGF19 in the Dorsal Vagal Complex Lowers Blood Glucose and Alters Excitability of Vagal Motor Neurons
Molly R. Gallop, Columbia University Medical Center, USA
Short Talk: Gastrointestinal Sensing of a High Fat Diet Is Sufficient to Increase Food Intake and Body Weight

Microbes, Host, Metabolites, Gut-Brain Axis (Hot Topics)
*Michael A. Fischbach, Stanford University, USA
Margaret J. McFall-Ngai, University of Hawai‘i at Mānoa, USA
The Rhythms of Nutrient Provision to the Microbes: Insights from the Squid-Vibrio Symbiosis
Karen Guillemin, University of Oregon, USA
Teaming with Microbes: Lessons from the Zebrafish
Liping Zhao, Shanghai Jiao Tong University, China and Rutgers University, USA
Dietary Fibers and Foundation Guild Gut Microbiota for Human Metabolic Health
*Kathryn E. Wollen, University of Pennsylvania, USA
Hepatic Lipogenesis and the Impact of Microbial Fructose Metabolism

Poster Session 3

THURSDAY, MARCH 26

Gut Immunity
*Lora V. Hooper, University of Texas Southwestern Medical Center, USA
*Fredrik Bäckhed, University of Gothenburg, Sweden

Filip K. Swirski, Massachusetts General Hospital, USA
Intraepithelial T Cells as Metabolic Gatekeepers
Daniel Winer, Toronto General Hospital, Canada
Gut Immunometabolism
Lora V. Hooper, University of Texas Southwestern Medical Center, USA
Mechanisms of Vitamin A Transport in the Intestine
Sarkis K. Mazmanian, California Institute of Technology, USA
Selective Modulation of Enteric Neurons Alters the Microbiome and Gut Physiology in Mice
Camila Ideli Morales Fénero, University of São Paulo, Brazil
Short Talk: Role of Microbiota on Low-Grade Inflammation Induced by a High Fat Diet in Adult Zebrafish
Kali M. Pruss, Stanford University, USA
Short Talk: Clostridium difficile Exploits the Metabolic End-Product of a Novel Component of the Host Anti-Microbial Immune Response
Beatrice SY Choi, Laval University, Canada
Short Talk: Modeling Human Dietary Protein Sources Exacerbates Diet-Induced Obesity and Hepatic Insulin Resistance in Mice through Early Perturbations of the Gut Microbiota

Hot Topics II
*Nancy A. Thornberry, Kallyope, Inc., USA
*Eric Yen, University of Wisconsin-Madison, USA
Saad Khan, University of Toronto, Canada
Gut-Liver B Cells Regulate Metabolic Disease During Diet Induced Obesity
Anupama Singh, The Salk Institute for Biological Studies, USA
Role of Neuronal Peptides in Intestinal Aging of C. elegans
Tibor Krisko, Weill Cornell Medical College, USA
Portal Vein Metabolite Profiling Reveals Microbiome-Dependent Metabolic Control of Hepatic Gluconeogenesis
Zheng Kuang, University of Texas Southwestern Medical Center, USA
Microbiota-Dependent Epigenetic Regulation of Energy Uptake and Homeostasis

Metabolic Regulation of the Gut-Brain Axis
*Louise Olofsson, University of Gothenburg, Sweden
*Thomas Alexander Lutz, University of Zürich, Switzerland
Federico E. Rey, University of Wisconsin--Madison, USA
A Systems Genetics Approach to Dissect Interactions Between Gut Microbes, Metabolites and the Host
Patrice D. Cani, Université Catholique de Louvain, Belgium
Gut-Brain Axis, Gut Microbiota and Metabolism: Novel Candidates?
Nadejda Bozadjieva, University of Michigan, USA
Short Talk: Early Perturbations of the Gut Microbiota Dictated by the Type of Bacterial Lipopolysaccharides
Nadejda Bozadjieva, University of Michigan, USA
Short Talk: Modeling Human Dietary Protein Sources Exacerbates Diet-Induced Obesity and Hepatic Insulin Resistance in Mice through Early Perturbations of the Gut Microbiota

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)
FRIDAY, MARCH 27
Departure