SUNDAY, JANUARY 17
Arrival and Registration

MONDAY, JANUARY 18
Welcome and Keynote Address (Joint)
Jeffrey I. Gordon, Washington University School of Medicine, USA
Nutrition, the Gut Microbiota and Infant Development

Chemical Biology of the Microbiome (Joint)
Emily P. Balskus, Harvard University, USA
Dissecting and Manipulating Microbial Metabolism in the Vagina and the Gut Microbiota
Mohamed S. Donia, Princeton University, USA
Chemical Ecology of the Human Microbiome in Health and Disease
Michael A. Fischbach, Stanford University, USA
Small Molecules from the Human Microbiota

Short Talks Chosen from Abstracts
The Vaginal Microbiome in Health and Disease (J3)
Jacques Ravel, University of Maryland School of Medicine, USA
Immunological and Microbial Modulation of the Cervicovaginal Microbiota and Spontaneous Preterm Birth
David MacIntyre, Imperial College London, UK
Glycan Mediated Microbiota-Host Interactions in the Reproductive Tract and Pregnancy Outcomes
David A. Relman, Stanford University, USA
The Post-Partum Microbiome and Predisposition Towards Spontaneous Preterm Birth
Katharina Ribbeck, Massachusetts Institute of Technology, USA
Modulation of the Properties of Cervicovaginal Mucus by the Microbiota: A Role in Spontaneous Preterm Birth?

Short Talks Chosen from Abstracts
Interactions of Pathogens with the Microbiota (J4)
Denise M. Monack, Stanford University, USA
Commensal Metabolites and Inhibitions of Salmonella
Bärbel Stecher, Ludwig-Maximilians-Universität München, Germany
Interaction of Pathogens and the Gut Microbiota
Trevor Lawley, Wellcome Sanger Institute, UK
Exploiting Commensal Bacteria to Combat Intestinal Infection
Manuela Raffatellu, University of California, San Diego, USA
Mechanisms of Commensal-Mediated Inhibition of Pathogens

Short Talks Chosen from Abstracts
Microbiome Transmission from Mother to Infants (J3)
Moran Yassour, Hebrew University of Jerusalem, Israel
Strain-Level Analysis of Mother-to-Child Bacterial Transmission during the First Few Months of Life
Anita L. Kozyrskyj, University of Alberta, Canada
Roles of Birth Mode and Infant Gut Microbiota in Intergenerational Transmission of Overweight and Obesity from Mother to Offspring
Grace M. Aldrovandi, University of California, Los Angeles, USA
When Mom is Sick: Maternal Health and the Infant Microbiome

Short Talks Chosen from Abstracts
Metabolic Pathways within the Microbiota (J4)
Alan Walker, University of Aberdeen, Scotland
Implications of Gut Microbiota Variability for Dietary and Therapeutic Interventions

TUESDAY, JANUARY 19
The Microbiome and Pregnancy Outcomes (J3)
Michal A. Elovitz, University of Pennsylvania School of Medicine, USA
Immunological and Microbial Modulation of the Cervicovaginal Microbiota and Spontaneous Preterm Birth

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Alan Walker, University of Aberdeen, Scotland
Implications of Gut Microbiota Variability for Dietary and Therapeutic Interventions
Kiran Patil, European Molecular Biology Laboratory, Germany
Impact of Therapeutic Drugs on Microbiota Metabolism
Lora V. Hooper, University of Texas Southwestern Medical Center, USA
Metabolism, the Microbiome, and the Circadian Clock
Short Talks Chosen from Abstracts

Poster Session 2

WEDNESDAY, JANUARY 20

Development of the Infant Gut Microbiota (J3)
Joseph F. Petrosino, Baylor College of Medicine, USA
Temporal Development of the Gut Microbiome in Early Childhood from the TEDDY Study
Marie-Claire Arrieta, University of Calgary, Canada
Maturation of the Gut Micro and Mycobiome and Risk of Asthma in Childhood
Erika C. Claud, University of Chicago, USA
Necrotizing Enterocolitis and the Preterm Infant Microbiome
Short Talks Chosen from Abstracts

Microbiome and Immunity (J4)
Ivaylo I. Ivanov, Columbia University, USA
Uptake and Presentation of Commensal Antigens
Wendy S. Garrett, Harvard School of Public Health, USA
Commensal Bacteria, Inflammation and Cancer
Kenya Honda, School of Medicine, Keio University, Japan
Mining the Microbiota and Identifying Effector Microbes that Causally Affect the Host Physiology
Short Talks Chosen from Abstracts

The Influence of Nutrition on Infants’ Microbiota and Health (J3)
Steven D. Townsend, Vanderbilt University, USA
Human Milk Oligosaccharides: Defense Against Pathogens
David M. Aronoff, Vanderbilt University, USA
Group B Streptococcus: Transmission of a Pathogen from Mother to Infant
Maria Carmen Collado, Institute of Agrochemistry and Food Technology-Spanish National Research Council, Spain
Impact of Maternal Diet and Environment/Geographical Location on Maternal Breast Milk Neonatal Microbiota
Short Talks Chosen from Abstracts

Optimizing the Microbiota for Cancer Treatment (J4)
Thomas Gajewski, University of Chicago, USA
Using Commensal Microbes to Fight Cancer
Melody Smith, Memorial Sloan Kettering Cancer Center, USA
Intestinal Microbiome Analyses Identify Biomarkers for Patient Response to CAR T Cell Therapy
Laurence Zitvogel, Institut Gustave Roussy, France
Mechanisms by Which Microbiota Impact Tumor Immunosurveillance
Short Talks Chosen from Abstracts

Poster Session 3

THURSDAY, JANUARY 21

The Mother and Infant Microbiome and Neurodevelopment (J3)
Speaker to be Announced
Tracy L. Bale, University of Maryland School of Medicine, USA
The Transfer of Stress and Trauma via the Maternal Vaginal Microbiome
Elaine Y. Hsiao, University of California, Los Angeles, USA
Perinatal Interactions between the Microbiome, Immunity, and Neurodevelopment
Jun R. Huh, Harvard Medical School, USA
Maternal Microbiota and Neurodevelopmental Abnormalities
Short Talks Chosen from Abstracts

The Microbiome, Intestinal Inflammation and Cancer (J4)
Ramnik Xavier, Massachusetts General Hospital, USA
Microbiota Compositions and Inflammatory Bowel Disease
Bana Jabri, University of Chicago, USA
Microbiota, Bowel Inflammation and Celiac Disease
Cynthia L. Sears, Johns Hopkins University School of Medicine, USA
Commensal Bacterial Biofilms Associated with Colon Cancer
Short Talks Chosen from Abstracts

The Placental and Endometrial Microbiota – A Debate: Technical Artifact or Biological Reality? (J3)
Jacques Ravel, University of Maryland School of Medicine, USA
Indira U. Mysorekar, Washington University School of Medicine, USA
Moving from ‘Microbiome’ to Microbes in the Placenta and Uncovering Microbial-Immune Crosstalk
Frederic D. Bushman, University of Pennsylvania, USA
De-Discovery of the Placenta Microbiome
Short Talks Chosen from Abstracts

Genetics of Microbe-Microbe Interactions (J4)
Seth Rakoff-Nahoum, Boston Children’s Hospital, USA
Talk Title to be Announced
Chun-Jun Guo, Weill Cornell Medicine, USA
A Genetic Approach to Investigate Microbe-Host Interaction at the Molecular Level

* Session Chair † Invited but not yet accepted  Program current as of June 20, 2020. Program subject to change. Meal formats are based on meeting venue. For the most up-to-date details, visit https://www.keystonesymposia.org.
**KEYSTONE SYMPOSIA**
on Molecular and Cellular Biology

**The Microbiome: From Mother to Child (J3)**
Scientific Organizers: Jacques Ravel, David M. Aronoff, Grace M. Aldrovandi and Maria Carmen Collado  
*Part of the Keystone Symposia Global Health Series, supported by the Bill & Melinda Gates Foundation*

**Harnessing the Microbiome for Disease Prevention and Therapy (J4)**
Scientific Organizers: Eric G. Pamer, Laurie E. Comstock and Alan Walker

**Laurie E. Comstock**, Brigham and Women's Hospital/Harvard Medical School, USA  
*Antagonism within the Microbiota*

**Andrew L. Goodman**, Yale School of Medicine, USA  
*Survival Strategies in the Gut Microbiome*

**Short Talks Chosen from Abstracts**

**Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (J3)**

**Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (J4)**

**FRIDAY, JANUARY 22**

**Departure**