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
Chemical Biology of the Microbiome (Joint)
Interactions between Phage and Intestinal Bacteria (J4)
Kimberley Seed, University of California, Berkeley, USA
Phage Dynamics during Intestinal Infection with Vibrio cholerae
Paul L. Bolyky, Stanford University, USA
Impact of Bacteriophage on Mammalian Cells
Colin Hill, University College Cork, Ireland
Shining Light on the Viral Dark Matter of the Human Gut Microbiome

Short Talks Chosen from Abstracts
The Vaginal Microbiome in Health and Disease (J3)
Jacques Ravel, University of Maryland School of Medicine, USA
The Host-Vaginal Microbiome Dialogue
Tal Korem, Columbia University, USA
Modeling Vaginal Metagenomes: Metabolomes in Health and Disease
Marguerite Indriati Hood-Pishchany, Boston Children's Hospital, USA
Interspecies Competition for Glycans in the Vaginal Microbiota

Short Talks Chosen from Abstracts
Poster Session 1

Tuesday, January 19
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
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
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
Metabolic Pathways within the Microbiota (J4)
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
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
Harnessing the Microbiome for Disease Prevention and Therapy - RESCHEDULING IN PROGRESS (J4)

Scientific Organizers: Eric G. Pamer, Laurie E. Comstock and Alan Walker

Supported by the Directors’ Fund

The Microbiome: From Mother to Child - RESCHEDULING IN PROGRESS (J3)

Scientific Organizers: Jacques Ravel, David M. Aronoff, Grace M. Aldrovandi and Maria Carmen Collado

January 17-21, 2021 • Keystone Resort • Keystone, CO, USA

Part of the Keystone Symposia Global Health Series, supported by the Bill & Melinda Gates Foundation

Scholarship Deadline: September 24, 2020 / Abstract Deadline: October 15, 2020 / Discounted Registration Deadline: November 17, 2020

WEDNESDAY, JANUARY 20

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

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

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

The Influence of Nutrition on Infants’ Microbiota and Health (J3)

Steven D. Townsend, Vanderbilt University, USA
Human Milk Oligosaccharides: Defense Against Pathogens

THURSDAY, JANUARY 21

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

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

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

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

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
Frederic D. Bushman, University of Pennsylvania, USA

Moving from ‘Microbiome’ to Microbes in the Placenta and Uncovering Microbial-Immune Crosstalk

De-Discovery of the Placenta Microbiome

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (J4)
Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (J3)

FRIDAY, JANUARY 22
Departure