

Oral Program

Sunday, January 26, 2020

- 16:00-17:30 Panel Discussion: Microbiome and Molecular Sciences: The Next Breakthroughs | Gardenia Room (sign-up required)
- 17:00-19:00 Registration | Promenade
- 18:00-19:00 Welcome Drinks Reception | Riverwalk Terrace

Monday, January 27, 2020

- 08:00-09:00 Registration | Promenade
- 08:30-09:00 Light Breakfast | Promenade
- 09:00-09:30 Opening Remarks | Jasmine Room
- 09:00-09:05 Sylvia Daunert, Director, *Dr. JT Macdonald Foundation Biomedical Nanotechnology Institute, University of Miami Miller School of Medicine, USA*
- 09:05-09:15 Joan Guinovart, Past-President, *IUBMB (International Union of Biochemistry and Molecular Biology) & IRB - Institut de Recerca Biomèdica, Spain*
- 09:15-09:25 Carl Schulman, Executive Dean for Research, *University of Miami Miller School of Medicine, USA*
- Henri Ford, Dean, *University of Miami Miller School of Medicine, USA*
- Jeffrey Duerk, Executive Vice President for Academic Affairs & Provost, *University of Miami Miller School of Medicine, USA*
- 09:25-09:30 Sapna Deo, Director of Graduate Studies of Biochemistry and Molecular Biology, *University of Miami Miller School of Medicine, USA*
- 09:30-12:15 Session 1: The Inner Workings of the Microbiome | Jasmine Room
- 09:30-10:15 **Feodor Lynen Lecture**
[K01] Quorum-sensing communication: From viruses to bacteria to eukaryotes
 Bonnie Bassler, *Princeton University USA*
- 10:15-10:45 Coffee Break | Promenade
- 10:45-11:15 **[INV01] Building and manipulating the human microbiome**
 Michael Fischbach, *Stanford University, USA*
- 11:15-11:30 **[Spotlight 1] Composition of the gut microbiome and resistome changes in response to pathogen invasion**
 Z. Hansen*, B. Nohomovich, W. Cha, S. Manning, *Michigan State University, USA*
- 11:30-11:45 **[Spotlight 2] Experimental validation of the competitive exclusion principle in gut ecosystems**
 R. Segura*¹, S. Mantz¹, R. Schmaltz¹, J. Walter², A. Ramer-Tait¹, *¹University of Nebraska-Lincoln, USA, ²University of Alberta, Canada*
- 11:45-12:15 **[INV02] Enabling technologies for quorum sensing molecule detection and their application as biomarkers**
 Sapna Deo, *University of Miami Miller School of Medicine, USA*
- 12:15-13:30 Lunch | Promenade
- 12:30-13:30 Meet the Cell Press Editors Q&A Session: Publishing High Impact Microbiome Research | Jasmine Room
- 13:30-14:30 Poster Session 1 | Hibiscus Room
- 14:30-16:00 Session 2: The Impact of the Environment on the Microbiome | Jasmine Room
- 14:30-15:15 **Special Achievement Award**
[K02] Resilience of the human microbiome in the face of environmental disturbance
 David A. Relman, *Stanford University, USA*
- 15:15-15:45 **[INV03] Microbiome interactions in health and disease**
 Eran Elinav, *Weizmann Institute, Israel*

- 15:45-16:00 **[Spotlight 3] E-cigarettes and the oral microbiome: Not a “lucky strike”**
P. Kumar, *The Ohio State University, USA*
- 16:00-16:30 Coffee Break | Promenade
- 16:30-18:00 Session 3: The Ecology of the Human Microbiome Through Time and Space | Jasmine Room
- 16:30-17:00 **[INV04] Th17 cell-induced depressive-like behaviors are regulated by a segmented filamentous bacteria/quorum sensing molecule autoinducer-2 circuit**
Eleonore Beurel, *University of Miami Miller School of Medicine, USA*
- 17:00-17:30 **[INV05] Archaea, neglected components of the human microbiome**
Christine Moissl-Eichinger, *Medical University Graz, Austria*
- 17:30-18:00 **[INV06] Opioid associated co-morbidities is modulated by the gut microbiome**
Sabita Roy, *University of Miami Miller School of Medicine, USA*

Tuesday, January 28, 2020

- 08:30-09:00 Light Breakfast | Promenade
- 09:00-12:00 Session 4: Harnessing the Power of The Microbiome to Treat Human Disease | Jasmine Room
- 09:00-09:45 **[INV13] Cancer etiology and therapeutics-A view from the microbiota**
Christian Jobin, *University of Florida, USA*
- 09:45-10:15 **[INV07] The impact of gut microbiota-derived metabolites in health and disease**
Shinji Fukuda, *Keio University, Japan*
- 10:15-10:45 **[Extended Spotlight 1] The vaginal microbiome during pregnancy and the risk of preterm birth**
Gregory A. Buck, *Virginia Commonwealth University, USA*
- 10:45-11:15 Coffee Break | Promenade
- 11:15-12:00 **Bill Whelan Award, UBMB Foundation**
[K04] Designing a user interface for the human microbiome
Rob Knight, *University of California, San Diego (UCSD), USA*
- 12:00-12:30 **[INV08] Gut Feelings: Microbiome as a key regulator of brain & behaviour across the lifespan**
John F. Cryan, *University College Cork, Ireland*
- 12:30-13:00 Lunch | Promenade
- 13:00-14:00 Poster Session 2 | Hibiscus Room
- 14:00-18:15 Session 5: Dysbiosis and Human Diseases | Jasmine Room
- 14:00-14:45 **Distinguished Service Award**
[K05] Our changing microbiome and epidemic chronic diseases
Martin J. Blaser, *Rutgers University, USA*
- 14:45-15:15 **[INV09] How can we manipulate the microbiome to treat inflammatory bowel disease**
Maria T. Abreu, *University of Miami Miller School of Medicine, USA*
- 15:15-15:30 **[Spotlight 4] Serum propionate and monocyte short chain fatty acid receptor expression is associated with exaggerated inflammation in patients with heart failure**
N. Glezeva¹, V. O'Sullivan¹, C. Watson², M. Ledwidge¹, K. McDonald¹, L. Brennan¹, J. Baugh^{*1}, ¹University College Dublin, Ireland, ²Queens University, UK
- 15:30-16:00 Coffee Break | Promenade
- 16:00-16:30 **[INV10] Pathogenic mechanisms of small intestinal microbiota in celiac disease**
Elena Verdú, *McMaster University, Canada*
- 16:30-17:00 **[INV11] UTI complexity at the bacterial-host interface: Blueprint for antibiotic-sparing therapeutics**
Scott J. Hultgren, *Washington University School of Medicine in St. Louis, USA*
- 17:00-17:30 **[INV12] What the bacterial metaproteome teaches us about the microbiome**
Jonathan Braun, *Cedars-Sinai Medical Center, USA*
- 17:30-17:45 **[Spotlight 5] Restoring the gut microbiota in a mouse model of Alzheimer's disease to reduce neurodegeneration after traumatic brain injury**
S. Villapol^{*1}, S. Soriano¹, Q. Wang², T. Treangen², ¹Houston Methodist Research Institute, USA, ²Rice University, USA
- 17:45-18:15 **[INV17] Regulation of allergic responses to food by intestinal bacteria**
Cathryn Nagler, *University of Chicago, USA*
- 19:00-22:00 Conference Dinner (Optional Ticketed Event)

Wednesday, January 29, 2020

- 08:30-09:00 Light Breakfast | Promenade
- 09:00-09:10 Poster Prize Presentation | Jasmine Room
- 09:10-13:05 Session 6: Microbiota and the Host: A Love-Hate Relationship | Jasmine Room
- 09:10-09:55 **IUBMB Lecture**
[K06] Lessons learned from interventional studies on diet and the human gut microbiome
James D. Lewis, *University of Pennsylvania* on behalf of Gary D. Wu, *University of Pennsylvania, USA*
- 09:55-10:25 **[INV14] Gut microbiota in IBD: From description to therapeutic target**
Harry Sokol, *Sorbonne University, France*
- 10:25-10:40 **[Spotlight 6] Improvement of T-cell trafficking and extravasation in distal tumors during gastrointestinal tract dysbiosis**
S.V. Jenkins¹, M.S. Robeson¹, R.J. Griffin¹, C.M. Quick¹, E.R. Siegel¹, M.J. Cannon¹, K.B. Vang², R.P.M. Dings^{*1}, ¹*University of Arkansas for Medical Sciences, USA*, ²*University of Arkansas at Little Rock, USA*
- 10:40-10:55 **[Spotlight 7] Mmp12 is a microbiota-dependent link between adipose tissue inflammation and mitochondrial health in type 2 diabetes**
M. Gurung^{*1}, Z. Li¹, R.R. Rodrigues¹, S. Vasquez-Perez¹, H. You¹, A. Dzutsev², A. Morgun¹, N. Shulzhenko¹, ¹*Oregon State University, USA*, ²*NCI, NIH, USA*
- 10:55-11:20 Coffee Break | Promenade
- 11:20-11:50 **[INV15] Mechanisms for microbiome effects on the immune system**
Charles Mackay, *Monash University, Australia*
- 11:50-12:20 **[INV16] Mechanisms of microbiome-led mucosal barrier dysfunction in intestinal diseases**
Mahesh Desai, *Luxemburg Institute of Health, Luxembourg*
- 12:20-12:35 **[Spotlight 8] The gut microbiome is required for skeletal muscle adaptation to exercise**
T. Valentino^{*}, I. Vechetti, C. Mobley, J. Goh, J. McCarthy, *The University of Kentucky, USA*
- 12:35-12:45 Closing Remarks | Jasmine Room
- 14:30-17:00 Little Havana Cultural Walking Tour (Optional Ticketed Event)