

# KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

## Host-Microbiome Interactions: Symbiosis, Competition and Holobiont Systems (S1)

July 27-30, 2020 • Clinical Sciences Building, Nanyang Technological University • Singapore, Singapore

Scientific Organizers: Staffan Kjelleberg, Margaret J. McFall-Ngai and Peter Steinberg

Singapore-Keystone Symposia conference organized in collaboration with Nanyang Technological University

Discounted Abstract & Scholarship Deadline: March 26, 2020 / Abstract Deadline: April 28, 2020 / Discounted Registration Deadline: May 27, 2020

### MONDAY, JULY 27

#### Arrival and Registration

### TUESDAY, JULY 28

#### Welcome and Keynote Address

**Thomas C.G. Bosch**, University of Kiel, Germany  
*Intricate Interactions within Metaorganisms in a Simple Model System, the Non-Senescent Cnidarian Hydra*

#### Evolution of Holobionts

##### Speaker to be Announced

**Rosie A. Alegado**, University of Hawai'i at Manoa, USA  
*Choanoflagellates as Windows into Animal Multicellularity*

**Alexandra Wilson**, University of Miami, USA  
*The Host/Symbiont Interface in Insect Models of Endosymbiosis*

**Katherine R. Amato**, Northwestern University, USA  
*Up from the Primates: Ecological Drivers of Microbiome Evolution in Humans*

##### Short Talk(s) Chosen from Abstracts

#### Coordination of the Ecosystem Within

**Philippe J. Sansonetti**, Institut Pasteur, France  
*Small Intestinal Bacterial Overgrowth and Child Stunting in Sub-Saharan Africa: From Descriptomics to Experimentomics*

**Edward G. Ruby**, University of Hawai'i at Mānoa, USA  
*Models and Mechanisms of Symbiont Impact and Coordination across the Host*

**Stéphane Hacquard**†, Max Planck Institute for Plant Breeding Research, Germany  
*Plant-Microbe Interactions*

##### Short Talk(s) Chosen from Abstracts

#### Panel Discussion 1: Evolution and Selection of Holobionts

\***Thomas C.G. Bosch**, University of Kiel, Germany

#### Poster Session 1

### WEDNESDAY, JULY 29

#### Holobionts and Resource Acquisition

**Jeffrey L. Bennetzen**, University of Georgia, USA  
*Host-Driven Patterns in Plant Microbiome Development, Succession and Function*

**Torsten Thomas**, University of New South Wales, Australia  
*Food vs. Friend: Host Microbiome Interactions in Marine Sponges*

**Jillian M. Petersen**, University of Vienna, Austria  
*Microbiomes and Energy Flow in Hydrothermal Vent Communities*

**Denise Dearing**, University of Utah, USA  
*Toxin Degradation by the Microbiome of Herbivorous Mammals*

##### Short Talk(s) Chosen from Abstracts

#### Poster Session 2

#### Holobionts in an Ecosystem Context

**David G. Bourne**, James Cook University, Australia  
*Symbiont Partnerships that Build Coral Resilience to Changing Environments*

**David Wardle**, Nanyang Technological University, Singapore  
*Consequences of Above and Below Ground Forest Holobiont Communities for Ecosystem Function*

**Liping Zhao**, Shanghai Jiao Tong University, China and Rutgers University, USA  
*Talk Title to be Announced*

##### Short Talk(s) Chosen from Abstracts

#### Panel Discussion 2: Integrating the Ecosystem within with the Host's Ecological Context

\***Margaret J. McFall-Ngai**, University of Hawai'i at Mānoa, USA

### THURSDAY, JULY 30

#### Translational Challenges and Solutions I

**Eran Elinav**, Weizmann Institute of Science, Israel  
*Intestinal Microbiota: Effects on Immune System, Health and Disease*

**Sven Pettersson**, Nanyang Technological University, Singapore  
*Microbiome Mediated Regulation of Mammalian Host Physiology*

##### Speaker to be Announced

**Peter Steinberg**, University of New South Wales, Australia  
*Management of Underwater Forests from a Holobiont Perspective*

##### Short Talk(s) Chosen from Abstracts

#### Translational Challenges and Solutions II

##### Speaker to be Announced

**Sanjay Swarup**, National University of Singapore, Singapore  
*Ecological Approaches for Phytobiome Engineering in Urban Farming*

**Philipp Engel**, University of Lausanne, Switzerland  
*Strain-Level View on the Gut Microbiota of Social Bees*

##### Short Talk(s) Chosen from Abstracts

#### Panel Discussion 3: Translational Challenges and Solutions

\***Staffan Kjelleberg**, Nanyang Technological University, Singapore

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

### FRIDAY, JULY 31

#### Departure