

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