

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Helminths: New Insights from Immunity to Global Health (T4)

December 8-12, 2019 • Southern Sun Cape Sun • Cape Town, Western Cape, South Africa
Scientific Organizers: De' Broski Herbert, P'ng Loke, Nicola L. Harris and Frank Brombacher
Part of the Keystone Symposia Global Health Series, supported by the Bill & Melinda Gates Foundation

Global Health Travel Award Deadline: July 9, 2019 / Discounted Abstract & Scholarship Deadline: August 8, 2019 / Abstract Deadline: September 24, 2019 / Discounted Registration Deadline: October 10, 2019

SUNDAY, DECEMBER 8

Arrival and Registration

MONDAY, DECEMBER 9

Welcome and Keynote Address

David Artis, Cornell University, USA
Regulation of Type 2 Immunity at Barrier Surfaces

Epithelial Cells and ILC2s in Helminth Infection

Amy H. Buck, University of Edinburgh, UK
Helminth Exosomes and their Interaction with the Epithelium

Jakob H. von Moltke, University of Washington, USA
Small Intestinal Tuft Cells: Sentinels and Effectors of Type 2 Immunity

De' Broski R. Herbert, University of Pennsylvania, USA
LINGO Proteins Control Helminth Immunity at the Mucosal Interface

Short Talks Chosen from Abstracts

Workshop 1

Short Talks Chosen from Abstracts

Maternal and Microbial Regulation of Helminth Infection

Richard K. Grensis, University of Manchester, UK
Microbiota, Whipworm Infection and Immune Regulation

Ken H. Cadwell, New York University School of Medicine, USA
Mechanisms of Helminth-Microbiota Interactions

Maria Yazdanbakhsh, Leiden University Medical Center, Netherlands
Modulation of Human Disease by Helminth-Microbiota Interactions

Short Talks Chosen from Abstracts

Poster Session 1

TUESDAY, DECEMBER 10

Helminth Biology and Genetics

James Collins, University of Texas Southwestern Medical Center, USA
Sex, Drugs, and Snails: Molecular Studies of Schistosome Biology

Tim J.C. Anderson, Texas Biomedical Research Institute, USA
Genetic Analysis of Adaptive Traits in a Surprisingly Tractable Human Parasite

Makedonka Mitreva, Washington University School of Medicine, USA
Applied Multi-Omics: Identifying Inhibitors that Target the Parasitic Nematodes Intestine

Elissa A. Hallem, University of California, Los Angeles, USA
Host-Seeking Behaviors of Skin-Penetrating Nematodes

Short Talks Chosen from Abstracts

Epidemiology and Ecology of Helminth Infections

Andrea L. Graham, Princeton University, USA
Ecological Determinants of Helminth Susceptibility and the Duration of Infection

Philip J. Cooper, St George's, University of London, UK
Epidemiology of Soil Transmitted Helminth Infections

Short Talks Chosen from Abstracts

Poster Session 2

WEDNESDAY, DECEMBER 11

Keynote Address

Judith E. Allen, University of Manchester, UK
Tissue Repair and Macrophage Activation

Myeloid Cells in Helminth Infection

William C. Gause, Rutgers New Jersey Medical School, USA
Myeloid Cell Polarization and Function in Helminth-Induced Type 2 Responses

Elia Tait Wojno, University of Washington, USA
Notch Signaling Controls a Basophil-Th2 Cell Interplay during Helminth Infection

P'ng Loke, New York University School of Medicine, USA
IL-4 Mediated Macrophage Activation

Short Talks Chosen from Abstracts

Helminth Control: Drug Development

Philip T. LoVerde, University of Texas Health Science Center, USA
Novel Strategies for Drug Development

Jennifer Keiser, Swiss Tropical and Public Health Institute, Switzerland
Improved Treatments for Soil-Transmitted Helminthiases

Short Talks Chosen from Abstracts

Poster Session 3

THURSDAY, DECEMBER 12

Keynote Address

Richard M. Maizels, University of Glasgow, UK
Helminth Derived Modulators of Host Immunity

Helminth Control: Vaccine Development

Thomas B. Nutman, NIAID, National Institutes of Health, USA
Resistance Against Human Helminth Infection

Sara Lustigman, New York Blood Center, USA
Onchocerca Volvulus Products that Stimulate Immunity

Maria Elena Bottazzi, Baylor College of Medicine, USA
The Road from Basic Biology to Vaccines against Neglected Tropical Diseases: Development and Testing of Anthelmintic Vaccines

Short Talks Chosen from Abstracts

Workshop 2

Short Talks Chosen from Abstracts

Helminth Modulation of Host Immunity

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Nicola L. Harris, Monash University, Australia

How Hookworm Escapes Innate Immunity

Frank Brombacher, International Center for Genetic Engineering and Biotechnology, South Africa

Cysteine Leukotrienes Drive Granulomatous Pathology around

Trapped Parasite Eggs during Chronic Schistosomiasis

Alex Loukas, James Cook University, Australia

The Hookworm Pharmacopoeia for Inflammatory Diseases

Short Talk Chosen from Abstracts

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

FRIDAY, DECEMBER 13

Departure