## 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 10, 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 Neuronal Basis Helminth Sensing and Type 2 Immunity

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 The Missing Link: Tuft Cells and the Intestinal Type 2 Immune Response

De' Broski R. Herbert, University of Pennsylvania, USA Trefoil Factor Proteins Regulate Immunity and Repair

Short Talk(s) Chosen from Abstracts

Workshop 1

**Short Talks Chosen from Abstracts** 

#### Maternal and Microbial Regulation of Helminth Infection

Richard K. Grencis, University of Manchester, UK Microbiota Regulation of Helminth Infection

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 Talk(s) Chosen from Abstracts

Poster Session 1

Infection

**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

Timothy J.C. Anderson, Texas Biomedical Research Institute, USA Schistosome Genetics

Makedonka Mitreva, Washington University School of Medicine, USA Comparative Genetics of Parasitic Helminths

Elissa A. Hallem, University of California, Los Angeles, USA Gene Editing in Parasitic Nematodes

Short Talk(s) Chosen from Abstracts

#### **Epidemiology and Ecology of Helminth Infections**

Andrea L. Graham, Princeton University, USA Ecological Determinants of Helminth Susceptibility and the Duration of Alison M. Elliott, MRC/UVRI & LSHTM Uganda Research Unit, Uganda

Effects of Helminth Co-Infections

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

Short Talk(s) 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 Neutrophils as Novel Players in Immunity against Helminths

Elia Tait Wojno, Cornell University, USA

Notch Signaling Controls a Host-protective Basophil-Th2 cell Interplay during Intestinal Helminth Infection

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

Short Talk(s) Chosen from Abstracts

#### **Helminth Control: Drug Development**

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

Jennifer Keiser, Swiss Tropical and Public Health Institute, Switzerland

Optimizing Drug Use in Human Populations

Robin B. Gasser, University of Melbourne, Australia Talk Title to be Announced

Short Talk(s) 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 Helminth 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 Anthelminthic Vaccines

Short Talk(s) Chosen from Abstracts

Workshop 2

**Short Talks Chosen from Abstracts** 

#### **Helminth Modulation of Host Immunity**

Nicola L. Harris, Monash University, Australia How Hookworm Escapes Innate Immunity

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Frank Brombacher, International Center for Genetic Engineering and Biotechnology, South Africa Talk Title to be Announced Alex Loukas, James Cook University, Australia The Hookworm Pharmacopoeia for Inflammatory Diseases

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

FRIDAY, DECEMBER 13

**Short Talk Chosen from Abstracts** 

**Departure**