

Parasitology Sessions

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The Annual Meeting features symposia, scientific sessions, poster presentations and a business meeting focusing on recent developments in molecular, cellular and immunoparasitology. The intent is to promote interactions among scientists who work in the varied disciplines of parasitology, especially in basic laboratory research, clinical sciences and population-based sciences. The scientific sessions of oral abstract presentations feature award recipients from the 2016 Woods Hole Immunoparasitology Meeting and Molecular Parasitology Meeting.

Monday

Scientific Session 23

American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP): Helminths – Cellular, Molecular and Immunoparasitology

Marriott – Room A602

Monday, November 14, 10:15 a.m. – Noon

10:15 a.m.

1930

DIALOGUE BETWEEN NEUTROPHILS AND HOOKWORMS DETERMINES PARASITE DEVELOPMENT

Tiffany Bouchery¹, Beatrice Volpe¹, Graham LeGros², Nicola Harris¹

¹UPHARRIS, Global Health Institute, EPFL, Lausanne, Switzerland; ²Malaghan Institute of Medical Research, Wellington, New Zealand

Oral presentation of abstracts 85–90.

Poster Session 26

Poster Session A: Presentations and Light Lunch

Hilton – Grand Ballroom and Grand Salon

Monday, November 14, Noon – 1:45 p.m.

Symposium 35

Malaria Metabolomics, Data Integration Challenges and Progress

Marriott – Marquis D

Monday, November 14, 1:45 p.m. – 3:30 p.m.

American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP) Council

President	Julian Rayner <i>Wellcome Trust Sanger Institute</i>
President-Elect	Christine Petersen <i>University of Iowa</i>
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Councilor for Trainees	Amy Bei <i>Harvard T.H. Chan School of Public Health</i>

Symposium 53**The 14th Annual American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP) Symposium: Parasitology and the CRISPR-Cas Revolution***Marriott – Imperial A***Tuesday, November 15, 8 a.m. – 9:45 a.m.**

CHAIR

Julian C. Rayner

Wellcome Trust Sanger Institute, Cambridge, United Kingdom

Christine Petersen

University of Iowa, Iowa City, United States

Parasites that cause significant tropical disease span a broad range of species, most of which are only distantly related to model experimental eukaryotes. This means that much of their biology is unique, and must be studied in the organisms themselves rather than inferred from model systems. Genetic manipulation has been a major tool to investigate this unique biology, but its application has often been limited and is currently routine in only a handful of parasite species. Genome editing by the CRISPR-Cas system radically increases the efficiency of genetic manipulation by using short guide RNAs to target an endonuclease to generate double stranded breaks at specific locations in genomes. CRISPR-Cas systems, and variants thereof, are currently revolutionizing genetic manipulation in many areas of biology, and have the potential to do the same to the study of parasite species. This symposium will present the current state of the art in the application of CRISPR-Cas to globally significant parasites species and the vectors that transmit them. In keeping with the breadth of fundamental parasitology covered by ACMCIP, the symposium covers a range of significant species: *Leishmania donovani*, the causative agent of visceral leishmaniasis; *Cryptosporidium parvum*, where genetic manipulation was not possible before the application of CRISPR-Cas; *Plasmodium falciparum*, where CRISPR-Cas is being applied to understand drug resistance and raising the prospect of large-scale genetic screens, and *Anopheles* species, where CRISPR-Cas is being applied to gene drive mechanisms aimed at controlling malaria transmission. The symposium will explain the science behind these revolutionary tools, and outline how they are being used to both understand basic parasite biology as well as to develop novel intervention tools.

Scientific Session 72**American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP): Malaria and Protozoal Diseases – Biology and Pathogenesis I***Marriott – Room M103/M104/M105***Tuesday, November 15, 10:15 a.m. – Noon**

10:15 a.m.

1931

Invited speaker from the Woods Hole Molecular Parasitology Meeting held in September 2016. See the Program Update for speaker information.

10:30 a.m.

1932

Invited speaker from the Woods Hole Molecular Parasitology Meeting held in September 2016. See the Program Update for speaker information.

Oral presentation of abstracts 693–697.

Late-Breaker Abstract Session 80**Late-Breakers in Basic Science/Molecular Biology***Marriott – Imperial A***Tuesday, November 15, 12:15 p.m. – 1:30 p.m.**

FREE Audio Recordings of Select Sessions



Wednesday

Scientific Session 109

American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP): Malaria and Protozoans – Molecular Biology

Marriott – Marquis B

Wednesday, November 16, 8 a.m.– 9:45 a.m.

8 a.m. **1933**

Invited speaker from the Woods Hole Molecular Parasitology Meeting held in September 2016. See the Program Update for speaker information.

8:15 a.m. **1934**

Invited speaker from the Woods Hole Molecular Parasitology Meeting held in September 2016. See the Program Update for speaker information.

Oral presentation of abstracts 1243–1247.

Scientific Session 123

American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP): Kinetoplastida – Molecular, Cellular and Immunobiology

Marriott – Marquis D

Wednesday, November 16, 10:15 a.m. – Noon

10:15 a.m. **1935**

IDENTIFICATION OF BROADLY CONSERVED CROSS-SPECIES PROTECTIVE *LEISHMANIA* ANTIGEN AND ITS RESPONDING CD4⁺ T CELLS

Zhirong Mou¹, Jintao Li², Dong Liu², Forough Khadem², Ifeoma Okwor², Jude E. Uzonna²

¹Department of Immunology, College of Medicine, University of Manitoba, Winnipeg, MB, United States; ²Department of Immunology, College of Medicine, University of Manitoba, Winnipeg, MB, Canada

10:30 a.m. **1936**

A NOVEL POPULATION OF NATURAL KILLER CELLS PLAYS A CRITICAL ROLE IN THE DEPLETION OF SPLENIC B2 B CELLS DURING EXPERIMENTAL AFRICAN TRYPANOSOMIASIS

Deborah Frenkel¹, Samuel J. Black²

¹University of Massachusetts, Department of Veterinary and Animal Sciences, Amherst, MA, United States; ²University of Massachusetts, Amherst, MA, United States

Oral presentation of abstracts 1304–1308.

Poster Session 131

Poster Session C: Presentations and Light Lunch

Hilton – Grand Ballroom and Grand Salon

Wednesday, November 16, Noon – 1:45 p.m.

Thursday

Scientific Session 166

American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP): Helminths – Immunology

Marriott – Room A601

Thursday, November 17, 8 a.m. – 9:45 a.m.

8 a.m. **1937**

ENDOGENOUS PHOSPHOLIPASE A₂ GROUP 1B (PLA₂G1B) HAS DIRECT ANTI-HELMINTH PROPERTIES AND IS ESSENTIAL FOR IMMUNITY TO *HELIGMOSOMOIDES POLYGYRUS*

Lewis Entwistle¹, Victoria S. Pelly¹, Stephanie M. Coomes¹, Yashaswini Kannan¹, Jimena Perez-Lloret¹, Nikolay Nikolov¹, Helena Helmby², David Hui³, Mark S. Wilson¹

¹The Francis Crick Institute, Mill Hill Laboratory, London, United Kingdom;

²Immunology and Infection Department, London School of Hygiene and Tropical Health, London, United Kingdom; ³Department of Pathology, Metabolic Diseases Institute, University of Cincinnati College of Medicine, Cincinnati, OH, United States

Oral presentation of abstracts 1870–1875.

Scientific Session 168

American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP): Malaria – Biology and Pathogenesis II

Marriott – Room A703/A704

Thursday, November 17, 8 a.m. – 9:45 a.m.

8 a.m. **1938**

Invited speaker from the Woods Hole Molecular Parasitology Meeting held in September 2016. See the Program Update for speaker information.

8:15 a.m. **1939**

Invited speaker from the Woods Hole Molecular Parasitology Meeting held in September 2016. See the Program Update for speaker information.

Oral presentation of abstracts 1876–1880.

Symposium 179

Gene Drives on the Horizon: Advancing Science, Navigating Uncertainty and Aligning Research with Public Values

Marriott – Room A601

Thursday, November 17, 10:15 a.m. – Noon



**Point of Entry:
First-Time Attendee Orientation**

Marriott – Atrium B

Sunday, November 13, 2:30 p.m. – 3:30 p.m.

Are you new to the ASTMH Annual Meeting and want to get the lay of the land? Don't miss our Point of Entry session. ASTMH staff will orient new attendees to the schedule, session structure and highlights of the Annual Meeting. Meet others attending the conference for the first time and expand your professional network while learning the ins and outs of the meeting.

**Join the American Committee
of Molecular, Cellular and
Immunoparasitology (ACMCIP)**

*For more information, visit
astmh.org/subgroups/acmcip*

ACMCIP Membership Dues

(ACMCIP dues are in addition to ASTMH dues)

Regular Member: **\$25**

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