

APICOMPLEXA-2025

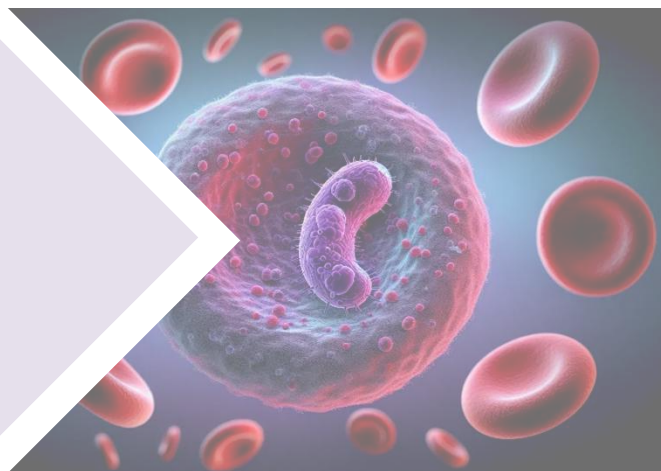
Virtual Symposium on

Apicomplexan Parasites Research

January 22-23, 2025 | Online | Eastern Time (USA)

Scientific chair:

Vern B. Carruthers, PhD, University of Michigan Medical School, MI.



Scientific Program

Wednesday, Jan 22nd, 2025

08:50-08:55 Zoom Joining and AV Check

08:55-09:00 Welcome and Introduction to Apicomplexa-2025 by
Vern B. Carruthers, University of Michigan Medical School, MI, United States

Session I - Toxoplasma - I

Session Chair: Dominique Soldati-Favre, University of Geneva, Switzerland

09:00-09:25 **Dominique Soldati-Favre**, University of Geneva, Switzerland
Glideosome-Associated Connector: Essential Driver of Apicomplexan Motility and Infection

09:25-09:50 **Lilach Sheiner**, Glasgow University, United Kingdom
The Exciting Insights Hiding in the Mitochondrion of *Toxoplasma gondii*

09:50-10:15 **Nishith Gupta**, BITS PILANI, Hyderabad, India
Phospholipids-mediated Regulation of Calcium Homeostasis and Lytic Cycle in *Toxoplasma*

10:15-10:40 **Cyrille Botte**, Universite Grenoble Alpes, France
Host-Apicomplexa Parasite Metabolic Interactions: It's (almost) All About Lipids!

10:40-11:05 **Diego Huet**, University of Georgia, GA, United States
Unraveling Interorganellar Communication in *Toxoplasma gondii*

11:05-11:35 30 mins Break

Session II - Toxoplasma - II

11:35-12:00 **Mathieu Gissot**, The Pasteur Institute of Lille, France
Sleeping Beauty's Nightmare: *Toxoplasma gondii* Latent Stage and Neuronal Connections

- 12:00-12:25** **Antonio Barragan**, Stockholm University, Sweden
Sequestration of Parasitized Phagocytes in Cortical Capillaries Promotes Neuronal Colonization by *Toxoplasma gondii*
- 12:25-12:50** **Sabrina Marion**, Institut Pasteur Lille, University of Lille, France
Latent Cerebral *Toxoplasma gondii* Infection Triggers Unique Neuro-immune Signatures and Exacerbates Pathophysiological Mechanisms of Alzheimer's Disease
- 12:50-13:15** **Vern B. Carruthers**, University of Michigan Medical School, MI, United States
Food for a Foodborne Parasite
- 13:15-13:40** **Maritza Jaramillo**, Institut National de la Recherche Scientifique, Canada
Remodeling of Host Transcriptional and Translational Programs during *Toxoplasma gondii* Infection

13:40-14:10 **30 mins Break**

Session III - *Cryptosporidium*

Session Chair: Carol A. Gilchrist, University of Virginia, VA, United States

- 14:10-14:35** **Amandine Guérin**, University of Geneva, Switzerland
Host Manipulation by the Parasite *Cryptosporidium*
- 14:35-15:00** **Jessica Kissinger**, University of Georgia, GA, United States
Gene Regulation and Transcription in *Cryptosporidium parvum*
- 15:00-15:25** **Xian-Ming Chen**, Rush University Medical Center, IL, United States
LncRNAs Modulate IFN-gamma-Stimulated Cell-intrinsic Anti-*Cryptosporidium* Defense
- 15:25-15:50** **Giovanni Widmer**, Cummings School of Veterinary Medicine at Tufts University, MA, United States
Cryptosporidium – Microbiota Interaction in The Mouse: Can Probiotics Protect against Severe Cryptosporidiosis?
- 15:50-16:15** **Guan Zhu**, Jilin University, China
The Protein Translational Initiation Machinery is a Novel Target for Developing Rapid-killing Therapeutics against Zoonotic *Cryptosporidium parvum*

16:15 **Day 1 Closing Remarks**

08:50-09:00 Zoom Joining and Day 2 Opening Remarks

Session IV – MALARIA – I

- 09:00-09:25 Michael Foley**, La Trobe University, Australia
Human Single Domain I-bodies Against AMA1 from Apicomplexan Parasites
- 09:25-09:50 Shailja Singh**, Jawaharlal Nehru University, New Delhi, India
Targeting PfProhibitin 2 – Hu-Hsp70A1A Complex during *Plasmodium falciparum* Invasion of Erythrocytes as a Novel Approach Towards Vaccine Candidacy
- 09:50-10:15 Purnima Bhanot**, Rutgers New Jersey Medical School, NJ, United States
PfPKG Inhibitors to Prevent Liver Infection by Plasmodium
- 10:15-10:40 Johan Ankarklev**, Stockholm University, Sweden
Uncovering the Mechanisms Underlying Malaria Transmission
- 10:40-11:05 Anat Florentin**, The Hebrew University of Jerusalem, Israel
Dynamic Imaging Reveals the Link Between DNA replication and Apicoplast Biogenesis in Malaria Parasites

11:05-11:35 30 mins Break

Session V – MALARIA – II

Session Chair: Sudhir Kumar, Iowa State University, IA, United States

- 11:35-12:00 Mathieu Brochet**, University of Geneva, Switzerland
Taking Life Changing Decisions in 10 Seconds: cGMP Signalling in Malaria Parasites
- 12:00-12:25 Michael Klemba**, Virginia Tech, VA, United States
Fatty Acid Acquisition by The Erythrocytic Malaria Parasite
- 12:25-12:50 Kasturi Haldar**, University of Notre Dame, IN, United States &
Souvik Bhattacharjee, Jawaharlal Nehru University, New Delhi, India
Conservation of Apicomplexan Mechanisms Suggest a New Model for Malarial Resistance to Artemisinins
- 12:50-13:15 Jennifer L. Small Saunders**, Columbia University, NY, United States
tRNA Modification Reprogramming Contributes to Artemisinin Resistance in *Plasmodium falciparum*
- 13:15-13:40 Karine Le Roch**, University of California, Riverside, CA, United States
A Systems Biology Approach to Antimalarial Drug Discovery

13:40-14:10 30 mins Break

Session VI – APICOMPLEXA

- 14:10-14:35** **Sean Prigge**, Johns Hopkins Bloomberg School of Public Health, MD, United States
The Secret Life of the Apicoplast
- 14:35-15:00** **Elena S. Suvorova**, University of South Florida, FL, United States
Solving Mysteries of Apicomplexan Cell Cycle
- 15:00-15:25** **William (Bill) J. Sullivan**, Indiana University School of Medicine, IN, United States
Translational Research in Apicomplexa
- 15:25-15:50** **Kourosh Zarringhalam**, University of Massachusetts Boston, MA, United States
Transcriptional Gene Regulation in Apicomplexa: Insights from Integrated Analysis of Single- Cell and DNA Occupancy Data
- 15:50-16:15** **Choukri Ben Mamoun**, Yale University, CT, United States
Babesia as a Model Organism for Investigating Intraerythrocytic Parasitism and Novel Anti-parasitic Therapeutic Strategies

16:15 **Symposium Closing Remarks**

Have a query? Reach out to us!

Contact us:

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