APICOMPLEXA-2025

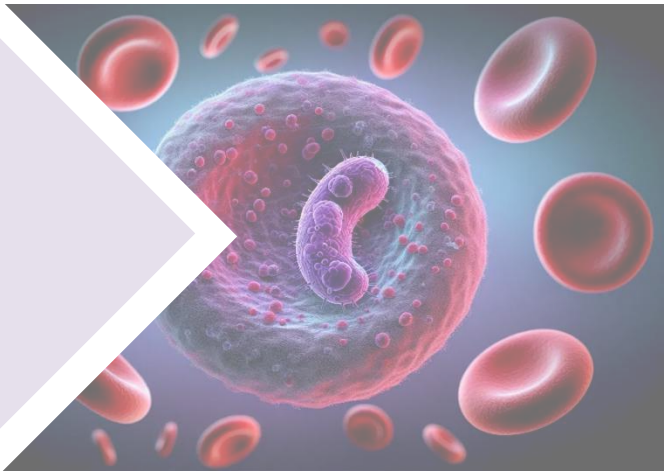
Virtual Symposium on

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

Session Chair: Lilach Sheiner, Glasgow University, United Kingdom

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**

Thursday, Jan 23rd, 2025

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

Session IV – MALARIA – I

Session Chair: Manuel Fierro, Clemson University, SC, United States

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 *Pf*Prohibitin 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
*Pf*PKG Inhibitors to Prevent Liver Infection by *Plasmodium*

10:15-10:40 **Johan Ankarklev,** Stockholm University, Sweden
Uncovering the Mechanisms Underlying *Plasmodium* 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

Session Chair: Elena S. Suvorova, University of South Florida, FL, United States

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:
Conference Secretariat,
Email: raj@apicomplexaconference.com

Organizer:

SCIREASE PVT LTD
#106, Aditya Sunshine, Kondapur, Hyderabad, TG, India, 500084.
Phone: +91 701-351-8698
Email: contact@scirease.org
Web: https://scirease.org/