

2nd Global Virtual Symposium on

TOXOPLASMOSIS

Tuesday, 8th February 2022

Timezone: Eastern Time (GMT-5)

Sponsor



About the Symposium

Welcome to our second virtual one-day symposium on the state-of-the-art in basic, clinical and translational toxoplasmosis research. Our speakers use the range of several methods and aim to develop vaccines, and prevention & control measures and will offer a unique opportunity for attendees to gain insights of the latest perspectives, updates, cutting-edge technological tools, and scientific advances in Toxoplasmosis research. We hope that you will enjoy this symposium and benefit from networking with attendees and speakers.



Chair:
Zhicheng Dou
Clemson University, SC, USA

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Epeius pharma is a cell and gene therapy company developing next-generation biological vehicles to deliver therapeutic proteins into the central nervous system (CNS). The lack of efficient CNS delivery methods limits protein replacement therapy and remains one of the greatest unmet needs for neurological disorders treatment. Our technology combining the naturally evolved BBB crossing capabilities of *Toxoplasma gondii* with state-of-the-art genetic manipulation tools to obtain optimal protein delivery. Our off-the-shelf products utilize the toxoplasma secretion machinery to tailor-made the protein expression for the relevant clinical indication — our POC product is designed to help Rett patients.

For more information, please visit: <https://www.futurx.co.il/portfolio/epeius-pharma/>

08:00 - 08:10 Welcome & Introduction to TOXO-2022

Symposium Chair: **Zhicheng Dou**, Clemson University, SC, USA

Session I - Basic Biology of Toxoplasmosis 1

Chair: **Clare Harding**, University of Glasgow, United Kingdom

08:10 - 08:35 **Mitochondria-*Toxoplasma* Conflict**

Lena Pernas, Max Planck Institute for Biology of Ageing, Germany

08:35 - 09:00 **Mitochondrial Enzymes in *Toxoplasma* - A Complex Story**

Lilach Sheiner, University of Glasgow, United Kingdom

09:00 - 09:25 **Is the Heme Biosynthesis Pathway A Drug Target for Controlling Infections from Intracellular Pathogens?**

Zhicheng Dou, Clemson University, SC, USA

09:25 - 09:50 **Elucidation of the Enigmatic Role of Conoid Extrusion in Apicomplexa**

Dominique Soldati-Favre, University of Geneva, Switzerland

09:50 - 10:15 **Cyclic Nucleotide Signaling in *Toxoplasma gondii***

Nishith Gupta, Humboldt University, Germany

10:15 - 10:25 **Short Break**

Session II - Basic Biology of Toxoplasmosis 2

Chair: **Zhicheng Dou**, Clemson University, SC, USA

10:25 - 10:50 **Membrane Biogenesis and Metabolic Adaptation of Apicomplexa Parasites: It's All About Lipids!**

Cyrille Botté, Université Grenoble Alpes, France

10:50 - 11:15 **Heavy Metal: The Role Iron Plays in *T. gondii***

Clare Harding, University of Glasgow, United Kingdom

11:15 - 11:40 **Separate to Operate: The Centriole-Free Inner Core of the Centrosome Regulates the Assembly of the Intranuclear Spindle in *Toxoplasma gondii***

Maria Eugenia Francia, Pasteur Institute of Montevideo, Uruguay

11:40 - 12:05 **Placing a BET on Transcriptional Initiation in *Toxoplasma gondii***

Vicki Jeffers, University of New Hampshire, NH, USA

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12:05 - 12:15 ***Toxoplasma gondii* as a Therapeutic Vehicle for Protein Replacement Therapies**

Daniel Walsh, Glasgow University, UK on behalf of Epeius Pharma, Israel

12:15 - 12:25 **Short Break**

Session III - Epidemiology and Ecology of Toxoplasmosis

Chair: **Maria Eugenia Francia**, Pasteur Institute of Montevideo, Uruguay

12:25 - 12:50 **Recent Advancements towards Understanding the Relative Contributions of Different Sources of *Toxoplasma gondii***

Pikka Jokelainen, Statens Serum Institut, Denmark

12:50 - 13:15 **Human Toxoplasmosis: Recent Updates about Who Gets It, Why, Where, Associations with Infection, Prevention, and Treatment**

Rima McLeod, University of Chicago, IL, USA

- 13:15 - 13:40 **Epidemiology of Ocular Toxoplasmosis in Eye Banks from São Paulo State, Brazil**
Hilda Fatima Jesus Pena, University of Sao Paulo, Brazil
- 13:40 - 14:05 ***Toxoplasma gondii* Prevalence in Waterfowl and Gulls from Eight States in the United States**
Tania Dawant, University of Tennessee, TN, USA
- 14:05 - 14:15 **Short Break**

Session IV - Immunology

Chair: **Rafael M Mariante**, Oswaldo Cruz Institute, Brazil

- 14:15 - 14:40 **The UPR Sensor IRE1 α Promotes Dendritic Cell Responses to Control *Toxoplasma gondii* Infection**
Sabrina Marion, University of Lille, France
- 14:40 - 14:55 **Nasal Nanoparticulate Vaccine for Protecting Against Lethal Toxoplasmosis in Zoos**
Didier Betbeder, Vaxinano, France
- 14:55 - 15:20 **The State-of-the-art of *Toxoplasma gondii*-induced Neutrophil Extracellular Traps in Intermediate and Definitive Hosts**
Rafael M Mariante, Oswaldo Cruz Institute, Brazil
- 15:20 - 15:45 **Perspectives for a Vaccine for Toxoplasmosis in Humans**
Jorge Enrique Gomez-Marin, University of Quindio, Colombia
- 15:45 - 15:55 **Short Break**

Session V - Chronic Toxoplasmosis

Chair: **Lilach Sheiner**, University of Glasgow, United Kingdom

- 15:55 - 16:20 **Apical Annuli are Essential Exocytic Sites in *Toxoplasma***
Ross Waller, University of Cambridge, United Kingdom
- 16:20 - 16:45 **Prospective Therapeutic Targets for Chronic *Toxoplasma* Infections**
Vernon B. Carruthers, University of Michigan Medical School, MI, USA
- 16:45 - 17:10 **Mechanisms of Survival of Latent *Toxoplasma***
Chris Tonkin, The Walter and Eliza Hall Institute of Medical Research, Australia
- 17:10 - 17:20 **Concluding Remarks**



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