**WEDNESDAY, DECEMBER 2**

**Welcoming Remarks and Keynote Address (8am Denver/Mountain Time Start)**
*Anne G. Kasmar*, Genentech, USA

Soumya Swaminathan, World Health Organization, Switzerland

**Taking Science-Based Solutions to Scale**

**Breakthroughs in Biomarkers (8:40am Denver/Mountain Time Start)**

*Bruno B. Andrade*, Fundação Oswaldo Cruz, Brazil

Breakthroughs from Brazil and Beyond

*Mark Hatherill*, University of Cape Town, South Africa

Can Host Blood Transcriptomic Biomarkers of Tuberculosis Inform Therapy?

Annemieke Geluk, Leiden University Medical Center, Netherlands

Short Talk: Biomarkers to Predict Leprosy: it takes two…

Elisa Nemes, University of Cape Town, South Africa

Short Talk: Immune Correlates of Protection in Humans

Eduardo Pinheiro Amaral, 275.00

Short Talk: GPX4 and BACH1 Regulate Necrotic Cell Death and Host Resistance in Mycobacterium Tuberculosis Infection in vivo

Courtney R. Plumlee, 275.00

Short Talk: Apparent Sterilizing Immunity in BCG-Immunized Mice Challenged with an Ultra-Low Dose of Mycobacterium tuberculosis

William R. Bishai, Johns Hopkins School of Medicine and K-RITH, USA

Short Talk: Host Immune Regulator PARP1 Drives TB Sex Differences

Yang Luo, Harvard Medical School, USA

Short Talk: Genome-to-Genome Analysis Identifies the Effect of the Host Immune Systems on Mycobacterium Tuberculosis and Its Impact on Clinical Outcomes

**Panel: COVID19 (10:50am Denver/Mountain Time Start)**

*Rodrigo Corrêa-Oliveira*, FIOCRUZ, Brazil

Morten Ruwald, FIND, Switzerland

Annette Vogel, BioNTech, Germany

David Alland, Rutgers University, New Jersey Medical School, USA

**Career Roundtable (12:30pm Denver/Mountain Time Start)**

Bryan D. Bryson, Massachusetts Institute of Technology, USA

Joao Monteiro, Nature Medicine, USA

Lakshmi Ramachandra, NIAID, National Institutes of Health, USA

**Poster Session 1 (1:30pm Denver/Mountain Time Start)**

Highlights from the Host (3pm Denver/Mountain Time Start)

Alan Sher, NIAID, National Institutes of Health, USA

Can Basic Immunology Solve Tuberculosis?

Patricia A. Darrah, NIAID, National Institutes of Health, USA

Mechanisms of Protection in Nonhuman Primates

Robert L. Modlin, University of California, Los Angeles, USA

Tricytotoxic CTLs in Leprosy and TB

*Katrin D. Mayer-Barber*, NIAID, National Institutes of Health, USA

Unexpected Aspects of Granuloma Biology

*Milton Ozório Moraes*, Oswaldo Cruz Institute- Fiocruz, Brazil

Short Talk: Autophagy and Host Metabolism in Leprosy

Emily Strong, 150.00

Short Talk: Identification of Autophagy Inhibiting Factors of Mycobacterium tuberculosis by High Throughput Loss of Function Screening

Kerry Hilligan, 275.00

Short Talk: Intravenous BCG Vaccination Transiently Depletes Alveolar Macrophages and Contributes to Protection against Mtb via Long-Term Remodeling of the Pulmonary Myeloid Compartment

Priyanka Talukdar, 150.00

Short Talk: Type III Interferons Are Expressed in Tuberculous Granulomas and Promote Inflammatory Phenotypes in Macrophages that Differ from Type I Interferons

Stacey Reanna Bartlett, 275.00

Short Talk: GPR183 Oxysterol Axis Is Dysregulated at the Site of Disease during M. tuberculosis Infection

**THURSDAY, DECEMBER 3**

**Back to Bacterial Basics (8am Denver/Mountain Time Start)**

Olivier Neyrolles, IPBS, CNRS-University of Toulouse, France

The Biology of Metals in Mycobacterial Virulence and Antimycobacterial Immunity

David R. Sherman, University of Washington, USA

How MTB Sees the Host-Pathogen Interface

Cressida Madigan, University of California, San Diego, USA

Short Talk: Live-Imaging M. Leprae

Babak Javid, University of California San Francisco, USA

Targeting Adaptive Mycobacterial Translation as Anti-Virulence Strategies

*Deborah T. Hung*, Broad Institute of MIT & Harvard, USA

Mining PROSPECT for TB Drugs

Todd A. Gray, 275.00

Short Talk: The Abundant Small Proteome of Mycobacterium tuberculosis

Naila Cristina Soler Camargo, University of São Paulo, Brazil

Short Talk: Pseudogenization as a Source of Genetic Variability to the Mycobacterium tuberculosis Complex

*Oyindamola Adeifayo*, Weill Cornell Medicine, USA

Short Talk: Functional Characterization of the Transcriptional Response to DNA Damage in Mycobacteria

Jamie H. Corro, 150.00

Short Talk: Visualization of Dormancy Induced by Ribosome Hibernation in Zinc-Starved Mycobacteria
Meet the Editors (12:30pm Denver/Mountain Time Start)
Salvatore Fabbiano, Cell Press, USA
George Hills, Sage Publications, UK
Zeljko Durdevic, EMBO Press, Germany
Francesca Dickens, Frontiers, UK

Data to Drive Innovation (3pm Denver/Mountain Time Start)
Gabriel D. Victora, Rockefeller University, USA
Clonal Dynamics of the Antibody Response
Sarah M. Fortune, Harvard TH Chan School of Public Health, USA
Multiscale Approaches Decipher the Many Faces of Altered Drug Susceptibility in Mycobacterium Tuberculosis
* Purvesh Khatri, Stanford University, USA
Adventures of a Data Parasite: Using Heterogeneity in "Dirty Data" to Accelerate Translational Medicine
Christopher M. Sassetti, University of Massachusetts Medical School, USA
Modeling Genetic Diversity in TB Susceptibility
Shabaana A. Khader, Washington University School of Medicine, USA
Tuberculosis Strain Diversity Drives Immune Response
* Shuyi Ma, 275.00
Short Talk: Data-Driven Inference of Drug Synergy
Caylin G. Winchell, 275.00
Short Talk: Defining the Role of CD8 T Cell Subsets in Tuberculosis in Non-Human Primates
Valdir C. Barth, 275.00
Short Talk: Mycobacterium tuberculosis VapC4 Toxin Engages Small ORFs to Initiate an Integrated Oxidative and Copper Stress Response

FRIDAY, DECEMBER 4

Rethinking Risk in TB (8am Denver/Mountain Time Start)
Neel R. Gandhi, Emory University, USA
Transmission is Driving the TB Epidemic, but Where Is the Majority of Transmission Occurring?
* Julio Croda, Oswaldo Cruz Foundation / Federal University of Mato Grosso do Sul / Yale School, Brazil
Tuberculosis in Prisons: Spillover and Impact in the Community
Padmini Salgame, Rutgers University, USA
MtB Transmissibility and Tissue Response
Kyoo Y. Rhee, Weil Cornell Medical College, USA
A Focus on Bacterial Factors
*Sara Suliman, Brigham and Women's Hospital, USA
Short Talk: Integration of Genetic and Transcriptional Profiles of Innate Cells to Decipher Mechanisms of TB Susceptibility
Betânia M.F. Nogueira, 150.00
Short Talk: The Effect of Dysglycemia on Mycobacterium tuberculosis Transmission to Close Contacts of Persons with Pulmonary Tuberculosis

Paul J. Converse, 275.00
Short Talk: The Next-Generation Diarylquinoline TBAJ-587 has Superior Efficacy Against, and Restricts Selection of, Bedaquiline-Resistant Rv0678 Mutants in a Mouse Model of Tuberculosis
Nittu Singh, CSIR-IMTECH, India
Short Talk: MtbEis Mediated Acetylation of RelMtb Regulates Stringent Response in Mycobacterium tuberculosis
Damian C. Ekiert, 275.00
Short Talk: CryoEM Structure of an Mce/YrbE ABC Transporter Complex sheds Light on Hydrophobic Transport across the Envelope

For the most up-to-date details, visit https://www.keystonesymposia.org.