

Colorado Mycobacteria Conference, 2016



Agenda

Tuesday, Jun 7, 2016 – Arrival Day

10:00 am 5 Km Fun Run

5:00 pm – 5:15 pm **Alan Rudolph**, MBA, PhD, Vice President for Research, Colorado State University, Fort Collins, CO

Welcome

5:15 pm – 6:15 pm **Warwick Britton**, M.D., Ph.D., Bosch Professor of Immunology Medicine, Central Clinical School, Centenary Institute of Cancer Medicine & Cell Biology, University of Sydney, Sydney, Australia

TB & Leprosy Research: Then and Now

6:15 pm – 8:00 pm Happy Hour (UCA) Social Event

8:00 pm – 9:00 pm **Gilla Kaplan**, Ph.D., Director, Tuberculosis Programs, Bill & Melinda Gates Foundation, Seattle, WA

Filling the Gaps: The BMGF Approach to TB Research and Development

Wednesday, Jun 8, 2016

Biochemistry/Physiology/Drug Development

Chair: **Dean Crick**, Ph.D., Colorado State University, Fort Collins, CO

8:15 am – 8:30 am Opening Comments

8:30 am – 9:30 am **Kyu Rhee**, MD, Ph.D., Weill Cornell Medical College, New York City, NY

Mycobacterial Metabolism: Chemical Biology at the Intersection of Pathogen Biology and Drug Development

9:30 am – 10:00 am **Joshua Thiede**, Ph.D., Department of Microbiology and Immunology, Center for Infectious Diseases and Microbiology Translational Research, University of Minnesota, MN

Potentiating the Anti-Tubercular Action of Antifolate Drugs

10:00 am – 10:30 am Coffee Break

10:30 am – 11:00 am **Anna Upton**, Ph.D., Director Biology, Global Alliance for TB Drug Development, New York City, NY

In Search of a New Generation of Bedaquiline

11:00 am – 12:00 am **Sir Thomas Blundell** FRS, FMedSci, Department of Biochemistry, University of Cambridge, Cambridge, UK

Genomics, Structural Biology and Discovery of New Antimicrobials: Recent Developments with M. tuberculosis and M. abscessus

12:00 pm – 1:00 pm Boxed lunch provided – enjoy in the CSU Flower Trial Garden. Poster Set Up

Chair: **Anne Lenaerts**, Ph.D., Colorado State University, Fort Collins, CO

1:00 pm – 1:30 pm **Martin Voskuil**, Ph.D., University of Colorado School of Medicine, Aurora, CO

Antibiotic Bactericidal Activity is Countered by Maintaining pH Homeostasis

1:30 pm – 2:00 pm **Kristiana Santoso**, Ph.D., Victoria University of Wellington, Wellington, New Zealand

The Development of Type II NADH Dehydrogenase Inhibitors as Anti-Tuberculosis Drugs

2:00 pm – 3:00 pm **Anura Rambukkana**, Ph.D., Centre for Regenerative Medicine, University of Edinburgh, Edinburgh, UK

Harnessing Mycobacterial Ingenuity of Cell Reprogramming: New Insights into Pathogenesis and Tissue Repair

3:00 pm – 5:00 pm Poster Session

5:00 pm - 6:00 pm Happy Hour, CooperSmith's (Poolside)

6:00 pm - 8:00 pm Dinner, CooperSmith's (Poolside)

Thursday, Jun 9, 2016

Immunology/Immunopathology/Host-Pathogen Interactions

Chair: **Diane Ordway**, Ph.D., Colorado State University, Fort Collins, CO

8:15 am – 8:30 am Opening Comments

8:30 am – 9:30 am **Daniel Hoft**, M.D., Ph.D., St. Louis University School of Medicine, St. Louis, MO

The Role of Human Gamma9/Delta2 T Cells in TB Immunity

9:30 am – 10:00 am **Angelo Izzo**, Ph.D., Department of Microbiology, Immunology and Pathology, Colorado State University, Fort Collins, CO

BCG?

10:00 am – 10:30 am Coffee Break

10:30 am – 11:00 am **Brendan Podell**, Ph.D., Department of Microbiology, Immunology and Pathology, Colorado State University, Fort Collins, CO

Early Immune Responses in the Guinea Pig Model of Diabetes-Tuberculosis Comorbidity

11:00 am - 12:00 am **Edward Chan**, M.D., Denver Veterans Affairs Medical Center; National Jewish Health Center; University of Colorado School of Medicine, Denver, CO

Nicotine Impairs Macrophage Control of Mycobacterium tuberculosis by Binding to Nicotine Acetylcholine Receptor, Activating NFkappaB and Inhibiting Autophagy

12:00 pm – 1:00 pm Boxed lunch provided – enjoy in the CSU Flower Trial Garden

1:00 pm – 1:30 pm **Bernadette Saunders**, Ph.D., University of Technology Sydney, Sydney, Australia

A Dominant-Negative Mutation in TNFR1 Results in Increased Susceptibility to Pulmonary Tuberculosis Infection

1:30 pm – 2:00 pm **Mercedes Gonzalez-Juarrero**, Ph.D., Department of Microbiology, Immunology and Pathology, Colorado State University, Fort Collins, CO

Preclinical studies of aerosolized host directed therapy for TB treatment

2:00 pm – 3:00 pm **Paula I. Fujiwara**, M.D., M.P.H, Scientific Director, International Union Against Tuberculosis and Lung Disease (The Union), Paris, France

Linking Research to the End TB Strategy — Will We Get There by 2035?

3:00 pm – 5:00 pm Poster Session

Friday, Jun 10, 2016

Epidemiology/Diagnostics/Biomarkers

Chair: **John Belisle**, Ph.D., Colorado State University, Fort Collins, CO

8:15 am – 8:30 am Opening Comments

8:30 am – 9:30 am **Gerhard Walzl**, M.D., University of Stellenbosch, Cape Town, South Africa

How Close Are We to Biomarker-Driven Interventions in TB?

9:30 am – 10:00 am **Bryna Fitzgerald**, Department of Microbiology, Immunology and Pathology, Colorado State University, Fort Collins, CO

A Novel Polyamine Catabolite Identified as a Urine Biomarker of TB Treatment Response

10:00 am – 10:30 am Coffee Break

10:30 am – 11:00 am **Mark Schoenbaum**, DMV, Ph.D., National Epidemiologist, Cattle Health Center of Veterinary Services of APHIS, USDA

US Cattle TB Eradication Program: Where is Mycobacterium bovis coming from now?

11:00 am – 11:30 am **Kathy Orloski**, DMV, MS, Diplomate, ACVPM (Epidemiology), Surveillance Design and Analysis Unit, Centers for Epidemiology and Animal Health, Veterinary Services, APHIS, USDA

Changing the Epidemiologic Paradigm at the Human Animal Interface: Using Whole Genome Sequencing to Track Mycobacteria bovis Infection across Species

11:30 am – 12:00 am **Adrian Muwonge**, Ph.D., Division of Genomics and Genetics, The Roslin Institute, University of Edinburgh, Edinburgh, UK

Predicting Cattle Movement Networks: Mycobacterium bovis Spatial-Genotyping Versus Gravity Modelling

12:00 pm – 1:00 pm Boxed lunch provided – enjoy in the CSU Flower Trial Garden

Chair: **Francisco Olea-Popelka**, D.V.M., Colorado State University, Fort Collins, CO

1:00 pm – 2:00 pm **Michael Strong**, Ph.D., National Jewish Health, Denver, CO

Nontuberculous Mycobacteria Impacting Individuals with or without Cystic Fibrosis: Genomic, Computational, and Epidemiologic Approaches

2:00 pm – 3:00 pm **Stacey Martiniano**, M.D., Department of Pediatrics, University of Colorado School of Medicine, Denver, CO

Diagnosis and Treatment of NTM Infection in Cystic Fibrosis

3:00 - 3:30 Closing Comments