

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Tuberculosis: Immunity and Immune Evasion (A2)

January 16-20, 2020 • Eldorado Hotel & Spa • Santa Fe, New Mexico, USA

Scientific Organizers: Joel Ernst, Jennifer Philips and Daniel L. Barber

Supported by the Directors' Fund

Global Health Travel Award Deadline: August 13, 2019 / Abstract & Scholarship Deadline: September 24, 2019 / Abstract Deadline: October 16, 2019 / Discounted Registration Deadline: November 19, 2019

THURSDAY, JANUARY 16

Arrival and Registration

FRIDAY, JANUARY 17

Welcome and Keynote Address

Eric Goosby, University of California, San Francisco / United Nations, USA

Global Solutions to Elimination of Tuberculosis: The Roles of Immunology and Vaccines

TB Vaccines and Vaccine Immunology

Patricia A. Darrach, NIAID, National Institutes of Health, USA
Mechanisms of Immune Protection by Systemic BCG Vaccination

Thomas J. Scriba, University of Cape Town, South Africa
Immune Responses to Diverse TB Vaccines in Humans

Ann M. Ginsberg, International AIDS Vaccine Initiative, USA
TB Vaccine Human Efficacy Trials - What Have We Learned? Where Are We Headed?

Short Talk(s) Chosen from Abstracts

Workshop 1: B Cells to the Rescue?

Short Talks Chosen from Abstracts

Impact of Host and Pathogen Diversity

Chetan Seshadri, University of Washington, USA
T Cell Memory to Mycobacterial Lipid Antigens

Sara Suliman, Brigham and Women's Hospital, USA
A Human Genetic Determinant of Progression to Active TB

Shabaana Khader, Washington University School of Medicine, USA
Immunity to Drug-Resistant TB

Sarah M. Fortune, Harvard TH Chan School of Public Health, USA
Single Cell RNAseq Reveals Novel Correlates of TB Granuloma Fate

Short Talk(s) Chosen from Abstracts

Poster Session 1

SATURDAY, JANUARY 18

Mechanisms of T Cell Protection

Marc K. Jenkins, University of Minnesota Medical School, USA
Development and Determinants of CD4 T Cell Responses to Intracellular Bacteria

Cecilia S. Lindestam Arlehamn, La Jolla Institute for Allergy and Immunology, USA
Diversity of Antigenic Targets in Human Tuberculosis

Daniel L. Barber, NIAID, National Institutes of Health, USA
*Protective CD4 T Cell Responses to *M. tuberculosis* Infection*

Paul Ogongo, Africa Health Research Institute, South Africa
*Diversity of *M. tuberculosis*-Specific Human T Cells at the Site of Infection in the Lungs*

Short Talk(s) Chosen from Abstracts

Workshop 2: Will DURTs Clean Up?

Short Talks Chosen from Abstracts

Immunometabolism and Host-Directed Therapies

Amit Singhal, Singapore Immunology Network, Singapore
Reprogramming Host Immunometabolic Circuits for Designing TB HDT

Sarah A. Stanley, University of California, Berkeley, USA
Modulation of Innate Immune Responses in Tuberculosis

Jennifer Philips, Washington University School of Medicine, USA
Targeting Host Metabolism to Treat TB

Short Talk(s) Chosen from Abstracts

Poster Session 2

SUNDAY, JANUARY 19

Lessons from other Persisters

Steven Holland, NIAID, National Institutes of Health, USA
Are Infections in the Lung and Outside it the Same? Host Factors in Mycobacterial Tissue Specificity

Nevil J. Singh, University of Maryland, USA
Impact of Persistent Antigenic Stimulation on CD4 T Cell Function

David L. Sacks, NIAID, National Institutes of Health, USA
Monocyte and Dendritic Cell Determinants of Immunity to Leishmania

Haina Shin, Washington University, USA
Antiviral Control of Chronic HSV Infection

Short Talk(s) Chosen from Abstracts

Mechanisms of T Cell Evasion

Joel D. Ernst, University of California, San Francisco, USA
Dendritic Cell and Macrophage Dichotomy in Tuberculosis: What Goes Wrong after T Cell Priming?

Samuel M. Behar, University of Massachusetts Medical School, USA
*Differential Processing of *M. tuberculosis* Antigens in Priming and Persistence*

Kevin B. Urdahl, University of Washington, USA
Barriers to Immunity in the TB Granuloma

Short Talk(s) Chosen from Abstracts

Poster Session 3

MONDAY, JANUARY 20

Pathogen Determinants of Immune Evasion

Steven A. Porcelli, Albert Einstein College Of Medicine, USA
**M. tuberculosis* Manipulation of MHC Class II Antigen Presentation*

Olivier Neyrolles, IPBS, CNRS-University of Toulouse, France
C-Type Lectin Receptors in Immunity to Tuberculosis

Maximiliano Gutierrez, Francis Crick Institute, UK
**Mycobacterium tuberculosis* Evasion of Xenophagy in the Cytosol of Host Cells*

Oren S. Rosenberg, University of California, San Francisco, USA
Structure and Function of ESX Secretion in Mycobacteria

Short Talk(s) Chosen from Abstracts

Workshop 3: Radical Immune Modulation for Treatment of XDR-TB

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Trained Immunity and Control of TB

Mihai G. Netea, Radboud University, Netherlands
Trained Immunity to Intracellular Pathogens

Maziar Divangahi, McGill University, Canada
Are Tolerance and Training Required to End TB?

Simone A. Joosten, Leiden University Medical Center, Netherlands
Trained Immunity in TB Exposure

Short Talk Chosen from Abstracts

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

TUESDAY, JANUARY 21

Departure