KEYSTONE SYMPOSIA
on Molecular and Cellular Biology

Tuberculosis: Translating Scientific Findings for Clinical and Public Health Impact (X7)

Scientific Organizers: Graeme Meintjes, Eric J. Rubin and Sabine Ehrt

Part of the Keystone Symposia Global Health Series, supported by the Bill & Melinda Gates Foundation

HIV and Co-Infections: Pathogenesis, Inflammation and Persistence (X8)

Scientific Organizers: Irini Sereti, Nicolas Chomont and Michaela Müller-Trutwin

April 15-19, 2018 • Fairmont Chateau Whistler • Whistler, British Columbia, Canada

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Global Health Travel Award Deadline: November 14, 2017 / Abstract & Scholarship Deadline: December 13, 2017 / Abstract Deadline: January 11, 2018 / Discounted Registration Deadline: February 15, 2018

SUNDAY, APRIL 15

Arrival and Registration

MONDAY, APRIL 16

Welcome and Keynote Session (Joint)

*__Irini Sereti__, NIAID, National Institutes of Health, USA

*__Graeme Meintjes__, University of Cape Town, South Africa

__Bruce D. Walker__, Ragon Institute of MGH, MIT and Harvard, USA
New Insights into HIV Pathogenesis: Implications for Immunotherapeutic Strategies

__Gavin J. Churchyard__, Aurum Institute NPC, South Africa
Translating TB Science to Impact the Epidemic

Prospects for Epidemic Control and the Scientific Insights Required (X7)

*__Eric J. Rubin__, Harvard T.H. Chan School of Public Health, USA

*__Henry Charles Mwandumba__, Liverpool School of Tropical Medicine, UK

__Richard E. Chaisson__, Johns Hopkins University, USA
Treatment of Latent TB for Epidemic Control

__Mark Hatherill__, University of Cape Town, South Africa
Translating Transcriptomic Insights into Clinical Tools

__Carole D. Mitnick__, Harvard Medical School, USA
(Re)Moving the Needle in Treatment for Rifampin-Resistant TB: The endTB Trial

__Michael Gordon Whitfield__, Stellenbosch University, South Africa
Short Talk: The Potential of Rifabutin for the Treatment of Rifampicin-Resistant Tuberculosis

__Francesca Tomasi__, Harvard T. H. Chan School of Public Health, USA
Short Talk: Small Molecule Inhibitors of Amino Acid Metabolism in Mycobacterium tuberculosis: A Model with Acivicin

__Meera Gurumurthy__, International Union Against TB and Lung Disease/Vital Strategies, Singapore
Short Talk: Randomised Controlled trial of Pascolizumab (Anti-IL-4 Monoclonal Antibody) as an Adjunct to Standard TB Treatment

Off to a Strong Start: Lessons from Acute HIV Infection (X8)

*__Nicolas Chomont__, Université de Montréal, Canada

*__Ann Duerr__, Fred Hutchinson Cancer Research Center, USA

__Thumbi Ndung'u__, University of KwaZulu-Natal, South Africa
Evidence of Transmission-Virulence Evolutionary Trade-Offs in the Spread of HIV-1 Subtypes

__Julie Mitchell__, US Military HIV Research Program, USA
T Cell Responses in Acutely Infected Young Men in Thailand

__John Frater__, University of Oxford, UK
Predictors of Outcome in Primary HIV Infection

__Elina El-Badry__, Emory University, USA
Short Talk: Zambian Women Exhibit an Exacerbated Inflammatory Response to Early HIV Infection Compared to Men

__Heeva Baharlou__, Westmead Institute for Medical Research, Australia
Short Talk: HIV and the Colorectal Mucosa – Investigating the Early Interactions of HIV with Mucosal Target Cells in situ

Workshop 1: TB Vaccines (X7)

*__Cesar A. Boggiano__, NIAID, National Institutes of Health, USA

*__Willem A. Hanekom__, Bill & Melinda Gates Foundation, USA
State of the TB Vaccine Field

__Karen Lacourciere__, NIAID, National Institutes of Health, USA
Funding Opportunities in TB Vaccine Research

__Lakshmi Ramachandra__, NIAID, National Institutes of Health, USA
Funding Opportunities in TB Vaccine Research

__Tracey Day__, Infectious Disease Research Institute, USA
Clinical Development of ID93+GLA-SE as a Prophylactic or Therapeutic Vaccine for Tuberculosis

__Stephen C. De Rosa__, University of Washington, Fred Hutchinson Cancer Research Center, USA
BCG Revaccination Significantly Boosts Circulating, Polyfunctional, Mtb-Specific CD4 T Cell Effector Responses in Young Adults with Latent TB Living in South India

__Karin Dijkman__, Biomedical Primate Research Centre, Netherlands
Local IL17A after Mucosal BCG Vaccination Associates with Protection from Infection and Disease in a Novel, Repeated Ultra-Low Dose TB Challenge Model in Rhesus Macaques

__Ved Prakash Dwivedi__, International Center for Genetic Engineering and Biotechnology, India
Mimicking Mycobacterium tuberculosis for the Immunization in the Lung thereby Generating Effective Vaccine in the Local Milieu

__Sasha E. Larsen__, Universty of Washington, USA
Therapeutic Immunizations Induce Control of Bacterial Burden and Increase Survival in a Preclinical Mouse Model of Mycobacterium tuberculosis

__Elisa Nemes__, University of Cape Town, South Africa
Prevention of Infection with Mycobacterium tuberculosis by H4:IC31® Vaccination or BCG Revaccination in Adolescents

Workshop 1: Role of Metabolism and Inflammation in SIV/HIV Pathogenesis and Reservoirs (X8)

*__Asier Sáez-Cirión__, Institut Pasteur, France

*__Michael A. Eller__, US Military HIV Research Program, USA

__Cristian Apetrei__, University of Pittsburgh, USA
High Fat Diet Exacerbates SIV Pathogenesis in SIVsab Infection Models

Mohamed Abdel-Mohsen, Wistar Institute, USA
Plasma and Immunoglobulin G Galactosylation Associate with HIV Persistence During Antiretroviral Therapy

Livia Ramos Goes, National Institutes of Health, USA
MAdCAM Costimulation in Presence of Retinoic Acid Promotes Viral Replication in Recently Activated Naïve CD4+ T Cells

Virginie W. Gautier, University College Dublin, Ireland
Targeting HIV Latency with Metabolic Cues

Sergei Nekhai, Howard University, USA
Upregulated Iron Metabolism Induces Intrinsic HIV-1 Restriction in Sickle Cell Disease

Sandra Milena Gonzalez Diaz, Universidad de Antioquia, Colombia
Active and Inactive Forms of Vitamin D Reduce the HIV-1 Infection of CD4+ T Cells in Vitro and Modulate their Activation Level

Emily Bowman, Ohio State University, USA
Altered Macrophage Phenotype in HIV Infection May Contribute to Vascular Inflammation

Robert Blomgran, Linköping University, Sweden
HIV Interferes with The DC-T Cell Axis of Macrophage Activation by Shifting Mycobacterium tuberculosis-Specific CD4 T Cells into a Dysfunctional Tolerized Phenotype

Mycobacterium Tuberculosis and Host Evasion (X7)

*__Sarah M. Fortune__, Harvard TH Chan School of Public Health, USA

*__Joel D. Ernst__, University of California, San Francisco, USA

JoAnne L. Flynn, University of Pittsburgh School of Medicine, USA
Granuloma Dynamics in Tuberculosis

Robert A. Seder, NIAID, National Institutes of Health, USA
A Novel Approach to BCG Vaccination in the NHP Model

Jennifer Philips, Washington University School of Medicine, USA
Hijacking the Host – Molecular Interactions between Host and Pathogen

Samuel M. Behar, University of Massachusetts Medical School, USA
Short Talk: Decoy Antigens Elicit Immunodominant T Cell Responses that Fail to Recognize Infected Macrophages

New and Old Players in Mucosal Immunity and their Role in HIV/SIV Infection (X8)

*__Barbara L. Shacklett__, University of California, Davis, USA

*__Karl Salzwedel__, NIAID, National Institutes of Health, USA

Johan K. Sandberg, Karolinska Institute, Sweden
Role of MAIT Cells in Immune Defense and HIV Immunopathogenesis

Petronela Ancuta, Centre de Recherche de l'Universite de Montreal, Canada
HIV Persistence in Th17 Cells: Finding New Ways to Cure

Jason M. Brenchley, NIAID, National Institutes of Health, USA
Mechanisms Underlying Loss of ILCs in Progressive SIV Infection

Dominic Paquin Proulx, US Military HIV Research Program, USA
Short Talk: Permanent Loss of Regulatory Colonic CD4+ iNKT Cells in Early Acute HIV-1 Infection

Poster Session 1

TUESDAY, APRIL 17

Drug Tolerance and Resistance (X7)

*__Sabine Ehrt__, Weill Cornell Medical College, USA

*__Christopher M. Sassetti__, University of Massachusetts Medical School, USA

Eric J. Rubin, Harvard T.H. Chan School of Public Health, USA
I Guess You're Just What I Needed – What Does it Mean to Be Essential?

Bree B. Aldridge, Tufts University, USA
Efficient Measurement and Analysis of High-Order Drug Interactions

Luiz Pedro Carvalho, Francis Crick Institute, UK
How to Make "Resistance-Proof" Antibiotics?

Mark Ragheb, University of Washington, USA
Short Talk: Mfd Promotes Rapid Evolution of Antibiotic Resistance

Sarah M. Fortune, Harvard TH Chan School of Public Health, USA
Multi-Drug-Tolerant Mutants Identified through a Population GWAS

Bryan J. Berube, Infectious Disease Research Institute, USA
Short Talk: Dual Targeting of the M. tuberculosis Electron-Transport Chain Enhances Bacterial Killing and Limits Spontaneous Mutant Formation

Innate Responses in HIV and SIV Infection: The Good, the Bad and the Splendid (X8)

*__R. Keith Reeves__, Harvard Medical School, USA

*__Anthony L. Cunningham__, Westmead Institute for Medical Research, Australia

Marcus Altfeld, Heinrich-Pette-Institute, Germany
Innate Immune Responses in HIV-1: Mediators of Viral Control and Immune Activation

Michaela Müller-Trutwin, Institut Pasteur, France
Innate Immune Responses in Non-Pathogenic SIV Infection

Teunis B.H. Geijtenbeek, University of Amsterdam, Netherlands
Innate Responses by Dendritic Cells in HIV Infection – A Role in Pathogenesis

Tram N.Q. Pham, Institut de Recherches Cliniques de Montreal, Canada
Short Talk: Flt3L Treatment Reduces HIV Infection and Replication in Humanized Mice via a Plasmacytoid Dendritic Cell-Dependent Process

Henrik N. Kloverpris, University of KwaZulu-Natal, South Africa
Short Talk: HIV-Infected Children Have Life-Long Depletion of all Circulating Innate Lymphoid Cells (ILCs) but Respond to Infection through Tissue-Resident ILCs

Daniel Claiborne, Ragon Institute of MGH, MIT, and Harvard, USA
Short Talk: Integral Role of Monocytes in Immune Activation during HIV-1 Infection

Ivona Pandrea, University of Pittsburgh, USA
Short Talk: Neutrophil Extracellular Trap (NET) Production in SIV-Infected Nonhuman Primates

Poster Session 2

Workshop 2: HIV, TB and Other Co-Infections (Joint)

*__Donald L. Sodora__, Center for Infectious Disease Research, USA

*__Shelby O'Connor__, University of Wisconson-Madison, USA

Allison Nicole Bucsan, Tulane National Primate Research Center, USA
Mtb/SIV Co-Infection Induces Differential T Cell Responses in Rhesus Macaques

Anna Kathleen Coussens, Walter and Eliza Hall Institute, Australia
GBPs in TB-HIV, A Double-Edge Sword in Prevention and Progression

Rabiah Fardoos, Africa Health Research Institute, South Africa
Profiling of HIV and CMV-Specific CD8+ T-Cells Isolated from HIV-Infected Human Lymphoid Tissue Display a Distinct Phenotype Compartmentalization

Collin Richard Diedrich, University of Pittsburgh, USA
SIVmac251 and Neutralizing CD4 T Cell Antibodies Induce Reactivation of Latent Tuberculosis Infection by Distinct Mechanisms

Amy Kathryn Dickey, Massachusetts General Hospital, Ragon Institute, USA
Slam Family Receptors May Act as Inhibitory Receptors in the Airways of HIV-Infected Individuals

Annapurna Vyakarnam, King's College London, UK
HIV Alters the Mtb-Specific Th17 Response in Latent TB

Joshua T. Mattila, University of Pittsburgh, USA
Type 3 Interferons Are Expressed in Tuberculous Granulomas and May Influence Signaling in Epithelioid Macrophages

Fatoumatta Darboe, University of Cape Town, South Africa
A Transcriptomic Risk Signature Predicts Subclinical TB in HIV-Infected Persons on Highly Active Antiretroviral Therapy

Immune-Pathogen Interaction: Containment or Progression? (X7)

*__Tom H. M. Ottenhoff__, Leiden University Medical Center, Netherlands

*__Clifton E. Barry III__, NIAID, National Institutes of Health, USA

Bryan D. Bryson, Massachusetts Institute of Technology, USA
Enhancing Control of Mycobacterium tuberculosis Infection with Single-cell Resolution

Christina L. Stallings, Washington University School of Medicine, USA
Innate Immune Determinants of TB Progression

David M. Lewinsohn, Oregon Health & Science University, USA
MAIT Cell Responses to the TB Metabolome and Implications for Vaccine Development

Daisy Xiaoxi Ji, University of California, Berkeley, USA
Short Talk: A Mechanism for Interferon-Driven Susceptibility to M. tuberculosis

New Insights in Pathogenesis: Tissue Is the Issue (X8)

*__Thomas J. Hope__, Northwestern University, USA

*__Marianne E. Jansson__, Lund University, Sweden

Michael R. Betts, University of Pennsylvania, USA
Lymphocyte Trafficking in HIV Infection

Eli Andrew Boritz, NIAID, National Institutes of Health, USA
HIV Reservoirs in Lymph Nodes

Shelli Farhadian, Yale School of Medicine, USA
Short Talk: Single-Cell RNA Sequencing to Characterize CSF during Virologically Suppressed HIV

Abigail E. Schiff, Harvard University, USA
Short Talk: Investigation of Alveolar Macrophage Phagocytosis of HIV-Infected T Cells as a Mechanism of HIV-1 Entry into Macrophages

Johanne Hovgaard Egedal, Aarhus University, Denmark
Short Talk: Hyaluronic Acid on Mucosal Fibroblasts Limits their Ability to Enhance HIV Infection of CD4+ T Cells

WEDNESDAY, APRIL 18

HIV and TB: Double Trouble (Joint)

*__Michaela Müller-Trutwin__, Institut Pasteur, France

*__Richard E. Chaisson__, Johns Hopkins University, USA

Graeme Meintjes, University of Cape Town, South Africa
High Early Mortality in Patients Diagnosed with HIV-Associated TB in Hospital

Gregory Bisson, University of Pennsylvania, USA
To Have and Have Not: Immune Restoration and Lung Injury in HIV/TB

Irini Sereti, NIAID, National Institutes of Health, USA
Role of Co-Infections in HIV Inflammation and Persistence

Henry Charles Mwandumba, Liverpool School of Tropical Medicine, UK
HIV and TB Co-Infection: A View from the Lungs

Daniel Kalman, Emory University, USA
Short Talk: The Imatinib-TB Clinical Trial

Mark Andrew Rodgers, University of Pittsburgh, USA
Short Talk: Pre-Existing SIV Infection Increases Susceptibility of Mauritian Cynomolgus Macaques to M. tuberculosis

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Grantsmanship Workshop presented by NIAID (Joint)

*__Alison Kraigsley__, NIAID, National Institutes of Health, USA
*__Karen Lacourciere__, NIAID, National Institutes of Health, USA
*__Susana Mendez__, NIAID, National Institutes of Health, USA
*__Vasundhara Varthakavi__, NIAID, National Institutes of Health, USA
*__Roberta Binder__, NIAID, National Institutes of Health, USA
*__Chelsea Boyd__, NIAID, National Institutes of Health, USA

Workshop 3: MTB Growth and Death (X7)

*__Eric J. Rubin__, Harvard T.H. Chan School of Public Health, USA
*__Bavesh Davandra Kana__, University of the Witwatersrand, South Africa

__Piyali S. Basu__, University of Surrey, UK
Nitrogen Metabolism in Mycobacterium tuberculosis: A Systems-Based Approach

__Viktoria Betin__, Harvard University, USA
Determining How Mycobacterium tuberculosis Transcriptional Regulators Influence Intracellular Replication

__Allison F. Carey__, Harvard School of Public Health, USA
TnSeq of M. tuberculosis Clinical Isolates Reveals Strain-Specific Antibiotic Liabilities

__Marcus A. Horwitz__, University of California, Los Angeles, USA
Identification by Parabolic Response Surface Methodology of a Universal TB Drug Treatment Regimen that, Compared with the Standard Regimen, Reduces the Time to Achieve Relapse-Free Cure in Mice from 20 Weeks to Only 4 Weeks

__Johana Hernandez__, University of Surrey, UK
Investigating Candidate Genes Affecting Persistence (drug tolerance) of Mycobacterium tuberculosis Obtained by Tn-Seq Analysis

__Christopher R. Covey__, University of Colorado, USA
Myocbactin Inhibits Clofazimine Killing of Mycobacteria

__John T. Williams__, Michigan State University, USA
Novel Inhibitors that Kill Mycobacterium tuberculosis by Targeting MmpL3

__Hua Wang__, Francis Crick Institute, UK
The Discovery of a Multi-Functional acyl-CoA Lyase Shared by Three Metabolic Pathways in Mycobacterium tuberculosis

Workshop 3: Persistence, Latency and Eradication (X8)

*__Remi Fromentin__, Le Centre de Recherche du Centre Hospitalier de l'Université de Montréal, Canada
*__Alberto Bosque__, George Washington University, USA

__Christina Gavegnano__, Emory University, USA
Baricitinib Reverses HIV-Associated Neurocognitive Disorders and Reservoir Seeding in a SCID Mouse Model

__Patrick Budylowski__, University or Toronto, Canada
Discovering Novel Surface Biomarkers on Latent HIV-Infected CD4 T Cells using VLR Antibodies

__Namita Satija__, Icahn School of Medicine at Mount Sinai, USA
A Genetically Encoded Switch to Monitor HIV Latent Cells in Humanized Mice

__Mykola Pinkevych__, University of New South Wales, Australia
Using a Barcoded Virus to Assess Replication Competent SIV Reservoir Size

__Sara Cristinelli__, University of Lausanne, Switzerland
Single-Cell RNA-Seq Reveals Transcriptional Heterogeneity in Latent and

__Stephen R. Morris__, Louis Stokes Cleveland VA Medical Center, USA
Short Talk: IL-15 Drives the Generation and Survival of Senescent CD8 T Cells in HIV/CMV Co-Infection

Poster Session 3

THURSDAY, APRIL 19

Bacterial Adaptation (X7)

*__Luiz Pedro Carvalho__, Francis Crick Institute, UK
*__Sabine Ehrt__, Weill Cornell Medical College, USA

__David Alland__, Rutgers University – NJMS, USA
Genetic Diversity of Mycobacterium tuberculosis as a Driver of Drug Resistance and Relapse in Human TB

__Stefan Niemann__, Research Center Borstel, Germany
Recent Evolution and Transmission of MDR M. tuberculosis Strains

__Hesper Rego__, Yale Medical School, USA
Exploring the Molecular Basis of Pathogen Heterogeneity

__Sarah Bwabye Namugenyi__,

*__Bryan D. Bryson__, Massachusetts Institute of Technology, USA
*__Thomas J. Scriba__, University of Cape Town, South Africa

__Jayne S. Sutherland__, Medical Research Council, Gambia
Analysis of Early Protective Immunity to Mycobacterium tuberculosis Infection

__Amanda Lee Ardain__, Africa Health Research Institute, South Africa
Innate Lymphoid Cells Mediate Early Protective Immunity against Mycobacterium tuberculosis

__Eusondia Arnett__, Texas Biomedical Research Institute, USA
Use of a Tissue Culture Model to Characterize M. tuberculosis HIV Co-Infected Human Granuloma Development

__Julie Boucau__, Ragon Institute of MGH, MIT and Harvard, USA
Mycobacterium tuberculosis Antigens Are

__Paula M. Cannon__, University of Southern California, Keck School of Medicine, USA
Genetic Strategies for HIV Cure

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (X7)

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (X8)

FRIDAY, APRIL 20

Departure

* Session Chair † Invited but not yet accepted Program current as of ***March 23, 2019***. Program subject to change. Meal formats are based on meeting venue. For the most up-to-date details, visit ***www.keystonesymposia.org/18X7*** and ***www.keystonesymposia.org/18X8***.

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In Latent and Reactivated HIV-Infected Cells

Gregory Q. Del Prete, Frederick National Laboratory for Cancer Research, USA
CD4 Depletion in SIV-Infected Macaques on Early ART Has No Impact on Viral Rebound

Maria-Louise Røn Kobberø, Aarhus University Hospital, Denmark
Immunological Effects of Toll-Like Receptor 9 Agonist Treatment in Lymph Nodes of HIV-1+ Adults on ART

Mirko Paiardini, Emory University, YNPRC, USA
IL-10 Signaling Contributes to Viral Persistence in ART-Treated, SIV-Infected Rhesus Macaques

The Cellular, Anatomical and Pathological Niches of TB Infection and Disease (X7)

*__Graeme Meintjes__, University of Minnesota, USA
Short Talk: Identification of Mycobacterium tuberculosis Immune Evasion Mechanisms using Tn-seq

Babak Javid, Tsinghua University School of Medicine, China
Targeting Mycobacterial Adaptive Mistranslation in Vitro and in Vivo

Eduardo Pinheiro Amaral, NIAID, National Institutes of Health, USA
Short Talk: Ferroptosis, an Iron-Dependent Cell Death Modality, Is a Major Mechanism of Regulated Necrosis in Mycobacterium tuberculosis Infection

HIV Persistence and Latency: The Enemy Within (X8)

*__Mark Brockman__, Simon Fraser University, Canada

*__Camille M. Lange__, National Cancer Institute, USA

B. Matija Peterlin, University of California, San Francisco, USA
HIV Latency and Reactivation

Nicolas Chomont, Université de Montréal, Canada
HIV Persistence and Aging

Ya-Chi Ho, Yale School of Medicine, USA
HIV-1 Viral and Differentially Degraded into Epitopes by Human Monocyte-Derived Dendritic Cells and Macrophages

Natasha M. Bourgeois, University of Washington School of Medicine, USA
Host-Directed Macrophage Therapy with Kinase Inhibitors Limit Mycobacterium tuberculosis Replication and Modulate Cytokine Signaling

Alissa C. Rothchild, Center for Infectious Disease Research, USA
In vivo Response of Alveolar Macrophages to Mycobacterium tuberculosis

Munyaradzi Nyasha Musvosvi, University of Cape Town, South Africa
T Cell Biomarkers for Diagnosis of Tuberculosis: Candidate Evaluation by a Simple Whole Blood Assay for Clinical Translation

Michael D. Stutz, Walter and Eliza Hall Institute, Australia
Harnessing the Therapeutic Potential of Endogenous TNF

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Cape Town, South Africa

*__David M. Lewinsohn__, Oregon Health & Science University, USA

__Clifton E. Barry III__, NIAID, National Institutes of Health, USA
Imaging TB

__Sabine Ehrt__, Weill Cornell Medical College, USA
Resist, Persist and Divide

__Veronique Anne Dartois__, Rutgers University, USA
Lesion-Centric Pharmacology to Design New Drug Regimens for Tuberculosis

__Valerie A.C.M. Koeken__, Radboud University Medical Center, Netherlands
Short Talk: Survival of Tuberculous Meningitis Is Linked to Cerebrospinal Fluid Vascular Endothelial Growth Factor (VEGF); a Systems Approach

HIV and Co-infections: Dangerous Liaison (X8)

*__Peter W. Hunt__, *Proviral Landscape*

__James I. Mullins__, University of Washington, USA
HIV Integration Sites and Selection for Infected Cell Survival in Persisting Reservoirs

__Kelsie Brooks__, Emory University, USA
Short Talk: Proviral Sequences of the Reservoir Demonstrate Archiving of Transmitted/Founder Virus-Like Variants

__Timothée Bruel__, Institut Pasteur, France
Short Talk: Characterization of Circulating CD32a+ CD4 T Cells and Identification of Potent ADCC-Mediating CD32 Antibodies

Workshop 4: The Immune Response to TB (X7)

for the Treatment of Tuberculosis

New Frontiers in TB Diagnostics and Treatment (X7)

*__David Alland__, Rutgers University – NJMS, USA

__Bavesh Davandra Kana__, University of the Witwatersrand, South Africa
Differentially Culturable Tubercle Bacteria: Implications for Diagnosis and Measuring Treatment Efficacy

__Nader Fotouhi__, TB Alliance, USA
TB Alliance Drugs in Development

__Jane Hill__, Dartmouth College, USA
Exhaled Breath: A Diagnostic Fluid that also Generates Insight into Pathogenesis

Strategies for HIV Remission and Cure (X8)

*__Jana Blazkova__, NIAID, National Institutes of Health, USA

*__Michael M. Lederman__, Case Western Reserve University, USA

__Asier Sáez-Cirión__, Institut Pasteur, France
Cell Metabolism and HIV Control

University of California, San Francisco, USA

*__Neeltje A. Kootstra__, Amsterdam UMC, Netherlands

__Andrea Lynn Cox__, Johns Hopkins University, USA
HIV- and HCV-Induced Inflammation

__Victor Appay__, INSERM U1135 - CIMI, France
Immune Aging and Co-Infections in HIV

__Elena Martinelli__, Population Council, USA
Role of Herpes Simplex in HIV/SIV Infection

__Romas Geleziunas__, Gilead Sciences, Inc., USA
TLR7 Agonists for HIV