FRIDAY, FEBRUARY 5
Arrival and Registration

SATURDAY, FEBRUARY 6
Organizer Welcome and Keynote Session (Joint)
* Paul G. Thomas, St. Jude Children's Research Hospital, USA
* Carolina B. López, University of Pennsylvania, USA
Eva Harris, University of California, Berkeley, USA
Dengue and Zika Virus Pathogenesis and Immunity
Barney S. Graham, NIAID, National Institutes of Health, USA
Overview of Respiratory Virus Vaccines

Inflammation and Innate Immunity in Viral Infections (Q1)
Siddharth Balachandran, Fox Chase Cancer Center, USA
Mechanisms of Influenza Virus-Induced Cell Death
Lisa P. Daley-Bauer, Emory University, USA
Combined Deficiency in Caspase-8 and RIPK3
Catherine A. Blish, Stanford University School of Medicine, USA
Defining the Role of NK Cells in Viral Immunity
Ken H. Cadwell, New York University School of Medicine, USA
Virome and High Inference Immunity
Short Talks Chosen from Abstracts

Beyond Acute Disease: Consequences of Respiratory Virus Infections (Q2)
Katelyn M. Gostic, University of Chicago, USA
Imprinting - First Exposure to Influenza Marks You for Life
Tina Hartert, Vanderbilt University School of Medicine, USA
Infant Respiratory Viral Infection and Childhood Asthma
Andrew E. Vaughan, University of Pennsylvania, USA
Chronic Post-Viral Effects on Lung Structure
Short Talks Chosen from Abstracts

Workshop 1: Innate Immunity in Viral Infections (Q1)
Short Talks Chosen from Abstracts

Workshop 1: Zoonoses (Q2)
Short Talks Chosen from Abstracts

Sensing the Virus and Antigen Presentation (Q1)
Jonathan W. Yewdell, NIAID, National Institutes of Health, USA
Virion Trafficking and Antigen Presentation in Zika
Ana Fernandez-Sesma, Icahn School of Medicine at Mount Sinai, USA
Role of STING in Antiviral Immunity to Flaviviruses, Alphaviruses and Beyond

Determinants of Clinical Outcome: New Perspectives on Virus/Host Interactions (Q2)
Carolina B. López, University of Pennsylvania, USA
Defective Viral Genomes during Respiratory Syncytial Virus Infection
Nicholas W. Lukacs, University of Michigan, USA
Early Life Respiratory Syncytial Virus Infection and Trained Immunity
Short Talks Chosen from Abstracts

Poster Session 1

SUNDAY, FEBRUARY 7
Mucosal Immunity (Joint)
Peter J.M. Openshaw, Imperial College London, UK
Mucosal Immunity to Respiratory Viruses
Stacey Lynne Schultz-Cherry, St. Jude Children's Research Hospital, USA
Astrovirus Infections in the Gut
David B. Masopust, University of Minnesota, USA
Antiviral T Cell Immune Surveillance
Ali H. Ellebedy, Washington University School of Medicine, USA
Tracking Human Immune Responses to Influenza Vaccines across Anatomical Compartments
Short Talks Chosen from Abstracts

Human Immunity in Blood and Tissues (Q1)
Katherine Kedzierska, University of Melbourne, Australia
Human Influenza-Specific CD8+ T Cells in Blood and Tissues
Donna L. Farber, Columbia University Medical Center, USA
Anti-Viral Immunity in Human Tissues
Frances E. Lund, University of Alabama at Birmingham, USA
B Cells and Antibody Secreting Cells across Human Tissues
Short Talks Chosen from Abstracts

New Approaches to Studying Respiratory Viruses I (Q2)
Susanne Herold, University of Giessen Lung Center, Germany
Organoid Modeling to Study the Pathomechanisms of Viral Lung Infection
Seema Lakdawala, University of Pittsburgh School of Medicine, USA
Microscopy to Study Viral Transport within Infected Cells
Rebecca Dutch, University of Kentucky, USA
Cell-to-Cell Transmission of hMPV and RSV
Short Talks Chosen from Abstracts

* Session Chair † Invited but not yet accepted     Program current as of June 20, 2020. Program subject to change. Meal formats are based on meeting venue. For the most up-to-date details, visit https://www.keystonesymposia.org.
Poster Session 2

MONDAY, FEBRUARY 8

T Cells, B Cells and their Receptors (Q1)

Paul G. Thomas, St. Jude Children’s Research Hospital, USA
Specificity of the CD8 T Cell Compartment in Viral Infections

Bryan Briney, The Scripps Research Institute, USA
Diversity in the Human Antibody Repertoire

Dirk Hans Busch, Technical University Munich, Germany
CD8+ T Cells in CMV Infection

Sophie A. Valkenburg, University of Hong Kong, Hong Kong
The Coordinated B and T Cell Response in Influenza Vaccination

Short Talks Chosen from Abstracts

Novel Insights into Respiratory Virus Biology (Q2)

Andrew B. Ward, The Scripps Research Institute, USA
Monitoring Antibody Responses to Influenza and Coronaviruses using Electron Microscopy

Speaker to be Announced

Rachel Fearns, Boston University, USA
Viral Transcription and Replication Mechanisms

Short Talks Chosen from Abstracts

Workshop 2: Adaptive Immunity in Viral Infections (Q1)

Short Talks Chosen from Abstracts

Pre-Existing Immunity and Co-Infections (Q1)

Patricia T. Bozza, Instituto Oswaldo Cruz, Brazil
Yellow Fever, Dengue and HIV

Tiffany A. Reese, University of Texas Southwestern Medical Center, USA
Herpesvirus and Helminth Co-Infections

Speaker to be Announced

Short Talks Chosen from Abstracts

Prevention and Treatment Strategies: Vaccines and Antivirals (Q2)

Kanta Subbarao, WHO Collaborating Centre for Reference and Research on Influenza, Australia
Progress on Influenza Vaccines

Pedro J. Cejas, Merck & Co., Inc., USA
RSV Therapies Designed from Human Disease Learnings: Vaccines and Antiviral Biologics

Silke Stertz, University of Zürich, Switzerland
Host Factors as Antiviral Targets

Kena Swanson, Pfizer Inc., USA
RSV Vaccines – Lessons Learned from Recent Experience

Poster Session 3

TUESDAY, FEBRUARY 9

Translational and Developmental Aspects of Antibodies (Joint)

Galit Alter, MIT and Harvard University, USA
Systems Serology to Characterize Antibody Responses

Nicole L. Kalleswaard, MedImmune, USA
Antibodies as Vaccine Surrogates – Successes and Challenges

Jesse D. Bloom, Fred Hutchinson Cancer Research Center, USA
Mapping Person-to-Person Variation in Viral Mutations that Escape Polyclonal Immunity

Short Talks Chosen from Abstracts

New Approaches to Anti-Viral Vaccines (Q1)

Florian Krammer, Icahn School of Medicine at Mount Sinai, USA
Novel Antigenic Targets for Influenza Vaccination

Andrea J. Sant, University of Rochester Medical Center, USA
Influenza Specific CD4 T Cell Responses to Vaccination and Infection

Gary J. Nabel, Sanofi, USA
Innovation in Antibody Structure and Design

Boerries Brandenburg, Janssen Vaccine, Netherlands
Talk Title to be Announced

Short Talks Chosen from Abstracts

New Approaches to Studying Respiratory Viruses II (Q2)

Speaker to be Announced

Single Cells

Ryan A. Langlois, University of Minnesota, USA
Immunity to Influenza in Dirty Mice

Mark T. Heise, University of North Carolina at Chapel Hill, USA
Systems Genetics Tools for Studying Respiratory Virus Pathogenesis

Christopher Chiu, Imperial College London, UK
Human Challenge Infection

Short Talks Chosen from Abstracts
**KEYSTONE SYMPOSIA**
on Molecular and Cellular Biology

**Viral Immunity: Basic Mechanisms and Therapeutic Applications (Q1)**

Scientific Organizers: Katherine Kedzierska and Paul G. Thomas

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

**Respiratory Viruses: New Frontiers (Q2)**

Scientific Organizers: Kanta Subbarao, JoAnn A. Suzich and Carolina B. López

February 5-9, 2021 • Fairmont Banff Springs • Banff, AB, Canada

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

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**WEDNESDAY, FEBRUARY 10**

**Departure**

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