

# KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

## New Discoveries in the Immunobiology of Asthma: Implications for Therapy (D1)

April 2-6, 2020 • Snowbird Resort • Snowbird, Utah, USA

Scientific Organizers: Michael J. Holtzman, Philippa C. Marrack, Anne I. Sperling and Prescott G. Woodruff

Supported by the Directors' Fund

Abstract & Scholarship Deadline: December 3, 2019 / Abstract Deadline: January 7, 2020 / Discounted Registration Deadline: February 3, 2020

### THURSDAY, APRIL 2

#### Arrival and Registration

### FRIDAY, APRIL 3

#### Welcome and Keynote Address

**David Artis**, Cornell University, USA  
*The Type 2 Immune Response in Asthma*

#### Innate-Adaptive Immune Interface

\***Philippa C. Marrack**, HHMI/National Jewish Health, USA  
**Bali Pulendran**, Stanford University School of Medicine, USA  
*Metabolic Control of APCs*  
**Xin Sun**, University of California, San Diego, USA  
*PNEC Control of ILC2s*

**Anne I. Sperling**, University of Chicago, USA  
*Lung DCs and Tissue Resident T Cells*

#### Short Talk(s) Chosen from Abstracts

#### Breaking the Type 2 Immune Mold

\***Anne I. Sperling**, University of Chicago, USA  
**Anuradha Ray**, University of Pittsburgh School of Medicine, USA  
*Non-Type 2 Mechanisms in Asthma*  
**Alexander Scheffold**, Christian-Albrechts-Universität zu Kiel, Germany  
*A New View of Tregs and the Microbiota in human Allergy*  
**Jenny P.Y. Ting**, University of North Carolina at Chapel Hill, USA  
*PRRs and Inflammasomes: Relevance to Asthma*

#### Short Talk(s) Chosen from Abstracts

#### Poster Session 1

### SATURDAY, APRIL 4

#### Cytokine Targeting in Asthma

\***Michael J. Holtzman**, Washington University in St. Louis, USA  
**Jonathan Corren**, University of California, Los Angeles, USA  
*Progress with TSLP*  
**Naimish Patel**, Sanofi Genzyme, USA  
*IL-4/13 Receptor Blockade in Asthma and Atopy*  
**Richard M. Locksley**, HHMI/University of California, San Francisco, USA  
*Type 2 Connections*  
**Joseph R. Arron**, Genentech, Inc., USA  
*Beyond Type 2: How Clinical Trials Inform New Therapeutic Target Discovery*

#### Short Talk(s) Chosen from Abstracts

#### Non-Cytokine Targeting in Asthma

**Peter G. Gibson**, University of Newcastle, Australia  
*Macrolide Antibiotics for Persistent Asthma: Clinical Impact and Potential Mechanisms*  
**William S. Powell**, McGill University, Canada  
*Novel Anti-Inflammatory OXE Receptor Antagonists*  
**Maria Belvisi**, Imperial College London, UK  
*Targeting Ion Channels in Asthma*

#### Short Talk(s) Chosen from Abstracts

#### Poster Session 2

### SUNDAY, APRIL 5

#### New Systems for Personalized Therapeutics

\***Richard M. Locksley**, HHMI/University of California, San Francisco, USA

**Clare M. Lloyd**, Imperial College London, UK  
*Stromal-Immune Interactions Regulating Pulmonary Immunity*

**Kambez H. Benam**, University of Colorado Denver, USA  
*Synthetic Biology at Tissue-Level: Microengineered Human Lung-on-a-Chip for Personalized Therapeutics*

**Max A. Seibold**, National Jewish Health, USA  
*Genetic and Genomic Insights into Asthma*

**Parameswaran Nair**, McMaster University, Canada  
*Relevance of Airway Autoimmunity to Therapy in Severe Asthma*

#### Short Talk(s) Chosen from Abstracts

#### New Controls in Asthma

\***Jenny P.Y. Ting**, University of North Carolina at Chapel Hill, USA

**Jeffrey Haspel**, Washington University in St. Louis, USA  
*A Time to Wheeze: The Circadian Clock in Asthma Pathogenesis*

**Vijay K. Kuchroo**, Brigham and Women's Hospital, Harvard Medical School, USA  
*Neuro-Immune Interactions in Regulation of ILC2 Activation and Function*

**Prescott G. Woodruff**, University of California, San Francisco, USA  
*Non-Type 2 Targets in Asthma*

#### Short Talk(s) Chosen from Abstracts

#### Poster Session 3

### MONDAY, APRIL 6

#### Stromal Cell Contributors to Airway Repair and Remodeling

\***Xin Sun**, University of California, San Diego, USA

**Hamida Hammad**, Ghent University & VIB, Belgium  
*Epithelial Cells as Immune Modulators*

**Michael J. Holtzman**, Washington University in St. Louis, USA  
*Defining and Drugging Stem Cells in Asthma*

**Jayaraj Rajagopal**, Massachusetts General Hospital, USA  
*A New Airway Epithelial Hierarchy*

**Aron B. Jaffe**, Novartis Institutes for BioMedical Research, USA  
*Specialized Epithelial Cells in Airway Disease*

#### Short Talk(s) Chosen from Abstracts

#### Upstream and Downstream Ways to Stop Airway Disease

\***Prescott G. Woodruff**, University of California, San Francisco, USA

**Elliot Israel**, Harvard Medical School/Brigham & Women's Hospital, USA  
*Tyrosine Kinase Inhibition in Asthma*

**David B. Corry**, Baylor College of Medicine, USA  
*STAT6 Inhibition and Allergen-Microbe Interactions*

**Antoon J.M. van Oosterhout**, GSK, UK  
*Asthma Remission: The New Therapeutic Frontier*

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**Short Talk Chosen from Abstracts**

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

**TUESDAY, APRIL 7**

**Departure**