

## Asthma: From Pathway Biology to Precision Therapeutics (B3)

Scientific Organizers: Clare M. Lloyd, John V. Fahy and Sally Wenzel-Morganroth

February 12–16, 2017

Keystone Resort, Keystone, Colorado, USA

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Scholarship Deadline: Oct 13, 2016 [\[details\]](#)

Discounted Abstract Deadline: Oct 13, 2016 [\[details\]](#)

Abstract Deadline: Nov 16, 2016 [\[details\]](#)

Discounted Registration Deadline: Dec 14, 2016 [\[details\]](#)

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### Conference Program [Print](#) | [View meeting in 12 hr \(am/pm\) time](#)

*The meeting will begin on Sunday, February 12 with registration from 16:00 to 20:00 and a welcome mixer from 18:00 to 20:00. Conference events conclude on Thursday, February 16 with a closing plenary session from 17:00 to 19:00, followed by a social hour and entertainment. We recommend return travel on Friday, February 17 in order to fully experience the meeting.*

#### SUNDAY, FEBRUARY 12

16:00–20:00 **Arrival and Registration** [Keystone Lodge Lobby](#)

18:00–20:00 **Welcome Mixer** [Keystone Lodge-Bighorn Bar](#)  
No registration fees are used to fund alcohol served at this function.

#### MONDAY, FEBRUARY 13

07:00–08:00 **Breakfast** [Divide & Ten Mile](#)

08:00–09:00 **Welcome and Keynote Address** [Arapahoe](#)  
[Registered attendees](#) can view abstracts starting on 01/12/2017

\* Clare M. Lloyd, Imperial College London, UK

Avrum Spira, Boston University, USA  
*The Airway Transcriptome for Precision Lung Cancer Detection*

09:00–11:15 **Asthma: Progress, Pathogenesis and Phenotypes** [Arapahoe](#)  
[Registered attendees](#) can view abstracts starting on 01/12/2017

\* Joseph R. Arron, Genentech, Inc., USA

Wendy C. Moore, Wake Forest School of Medicine, USA  
*Cluster Phenotypes and Personalized Medicine in the Clinic*

Coffee Break

**John V. Fahy**, University of California, San Francisco, USA  
*Role of IL-6 and Systemic Inflammation in Asthma Pathogenesis*

**Fernando D. Martinez**, University of Arizona, USA  
*Early Origins of Asthma*

**Kedir N. Turi**, Vanderbilt University, USA  
*Short Talk: Identification of Infant Acute Respiratory Illness Cytokine-Response Subgroups Associated with Recurrent Wheezing Phenotype*

**Zala Rojnik**, AstraZeneca, Sweden  
*Short Talk: IL-6 Trans-Signaling Gene Signature Reveals an Asthma Subtype with Increased Mucosal Infiltration of Immune Cells*

11:15–14:30

**On Own for Lunch**

11:15–13:00

**Poster Setup**[Divide & Ten Mile](#)

13:00–22:00

**Poster Viewing**[Divide & Ten Mile](#)

14:30–16:30

**Workshop 1: Phenotyping Methods/Cluster Analysis**[Arapahoe](#)\* **Geoffrey L. Chupp**, Yale University, USA

**Anthony Bosco**, Telethon Kids Institute, Australia  
*Persistent Activation of Interlinked Th2-Airway Epithelial Gene Networks in Sputum-Derived Cells from Aeroallergen-Sensitized Symptomatic Atopic Asthmatics*

**Peter McErlean**, Kings College London, UK  
*Epigenetic Landscape of the Asthmatic Airways*

**Johan Kolmert**, Karolinska Institutet, Sweden  
*Urinary Eicosanoid-Based Sub-Phenotyping in the U-BIOPRED Severe Asthma Cohort Demonstrates Phenotype Stability between Baseline and Longitudinal Sampling*

**Michael Peters**, University of California, San Francisco, USA  
*Sputum RNA-Seq Analysis Reveals Novel Asthma Endotypes Characterized by Cell-Type Specific Signatures*

**Marc Massanari**, Circassia, USA  
*Impact of FeNO on Treatment Decisions: Results from the ASTH2MA (ASsessment of TH2 inflamMation) Survey*

**Xiting Yan**, Yale University School of Medicine, USA  
*Longitudinal RNA Sequencing Data of Induced Sputum in Asthma Patients Reveals Stable Transcriptional Endotypes of Asthma Associated with Asthma Severity*

**Samir Kelada**, University of North Carolina at Chapel Hill, USA  
*Meta- and Sub-type Analysis of Airway Epithelia Gene Expression in Asthma*

16:30–17:00

**Coffee Available**[Gallery](#)

17:00–19:00

**Complex Phenotypes and How to Approach Them**[Arapahoe](#)[Registered attendees](#) can view abstracts starting on 01/12/2017\* **Sally Wenzel-Morganroth**, University of Pittsburgh, USA

**Eric P. Xing**, Carnegie Mellon University, USA  
*Toward Personalized Pan-Omic Association Analysis under Complex Structures*

**Anne Dixon**, University of Vermont College of Medicine, USA  
*Obesity and Asthma*

**Sejal Saglani**, Imperial College London, UK  
*Severe Therapy Resistant Asthma in Children: Translational Approaches to Uncover Sub-phenotypes*

**Kapil Gadkar**, Genentech, Inc., USA  
*Short Talk: A Mechanistic Systems Pharmacology Model for*

*Evaluating Potential Drugs for Treatment of Asthma*

19:00–20:00	<b>Social Hour with Lite Bites</b> No registration fees are used to fund alcohol served at this function.	<a href="#">Divide &amp; Ten Mile</a>
19:30–22:00	<b>Poster Session 1</b>	<a href="#">Divide &amp; Ten Mile</a>

**TUESDAY, FEBRUARY 14**

07:00–08:00	<b>Breakfast</b>	<a href="#">Divide &amp; Ten Mile</a>
08:00–11:15	<b>Regulation and Treatment of Type 2 Inflammation in the Airway</b> <a href="#">Registered attendees</a> can view abstracts starting on 01/12/2017  * <b>John V. Fahy</b> , University of California, San Francisco, USA  <b>Andrew D. Luster</b> , Massachusetts General Hospital, USA <i>Regulatory T cell Subsets in Type 2 Airway Inflammation</i>  <b>Clare M. Lloyd</b> , Imperial College London, UK <i>Epithelial Cells as Master Regulators of Pulmonary Inflammation</i>  <b>Coffee Break</b>  <b>Anne I. Sperling</b> , University of Chicago, USA <i>Differences in Asthma and Atopy Risk are Associated with Altered Immune Phenotypes: Studies in Amish and Hutterite Farm Children</i>  <b>Carla V. Rothlin</b> , Yale University, USA <i>Negative Regulation of Type 2 Immunity</i>  <b>Irma Tindemans</b> , Erasmus MC, Netherlands <i>Short Talk: Notch Signaling in T Cells is Essential for Allergic Airway Inflammation, but Expression of the Notch Ligand Jagged on Dendritic Cells and Lymph Node Stromal Cells is Dispensable</i>  <b>Rafael de Queiroz Prado</b> , NIAID, National Institutes of Health, USA <i>Short Talk: IL-4R-Alpha Signaling in Myeloid Cells Regulates Neutrophil-Induced Inflammation in Asthma</i>	<a href="#">Arapahoe</a>
11:15–17:00	<b>On Own for Lunch</b>	
11:15–13:00	<b>Poster Setup</b>	<a href="#">Divide &amp; Ten Mile</a>
13:00–22:00	<b>Poster Viewing</b>	<a href="#">Divide &amp; Ten Mile</a>
16:30–17:00	<b>Coffee Available</b>	<a href="#">Gallery</a>
17:00–19:00	<b>Novel Pathways Underlying Complex Phenotypes of Asthma</b> <a href="#">Registered attendees</a> can view abstracts starting on 01/12/2017  * <b>Anuradha Ray</b> , University of Pittsburgh School of Medicine, USA  <b>Bruce D. Levy</b> , Brigham and Women's Hospital, USA <i>Regulation of Airway Innate Immunity by Specialized Pro-Resolving Mediators</i>  <b>Prescott G. Woodruff</b> , University of California, San Francisco, USA <i>Non-type 2 Inflammatory Pathways in Asthma</i>  <b>Max A. Seibold</b> , National Jewish Health, USA <i>Dual RNA-seq Reveals Respiratory Virus Infection in Asthmatic Children without Respiratory Illness is Associated with Changes in the Airway Transcriptome</i>	<a href="#">Arapahoe</a>

**Padraic Fallon**, Trinity College Dublin, Ireland  
*Short Talk: A mouse Model of Spontaneous IL-17 Dependent Asthma*

19:00–20:00	<b>Social Hour with Lite Bites</b> No registration fees are used to fund alcohol served at this function.	<a href="#">Divide &amp; Ten Mile</a>
19:30–22:00	<b>Poster Session 2</b>	<a href="#">Divide &amp; Ten Mile</a>

### WEDNESDAY, FEBRUARY 15

07:00–08:00	<b>Breakfast</b>	<a href="#">Divide &amp; Ten Mile</a>
08:00–11:15	<b>Influence of Pathogenic and Protective Microbes</b> <a href="#">Registered attendees</a> can view abstracts starting on 01/12/2017  * <b>Clare M. Lloyd</b> , Imperial College London, UK  <b>Benjamin J. Marsland</b> , Centre Hospitalier Universitaire Vaudois, University of Lausanne, Switzerland <i>Influence of the Microbiome on the Development of Asthma</i>  <b>Anuradha Ray</b> , University of Pittsburgh School of Medicine, USA <i>Infections and Immune Responses Impacting Asthma Inception and Severity</i>  <b>Coffee Break</b>  <b>David J. Jackson</b> , NHLI, Imperial College London, UK <i>Mechanisms of Virus Induced Exacerbations of Asthma</i>  <b>Roland W. Kolbeck</b> , MedImmune, LLC, USA <i>Targeted Treatment of Inflammatory Mediators of Asthma</i>  <b>Henry J. McSorley</b> , Queen's Medical Research Institute, UK <i>Short Talk: A Helminth-Derived Suppressor of the IL-33 Pathway</i>  <b>Daniel J. Spakowicz</b> , Yale University, USA <i>Short Talk: Using Microbial Composition within Sputum Transcriptome Data to Stratify Patients by Asthma Severity</i>	<a href="#">Arapahoe</a>
11:15–17:00	<b>On Own for Lunch</b>	
11:15–13:00	<b>Poster Setup</b>	<a href="#">Divide &amp; Ten Mile</a>
13:00–22:00	<b>Poster Viewing</b>	<a href="#">Divide &amp; Ten Mile</a>
16:30–17:00	<b>Coffee Available</b>	<a href="#">Gallery</a>
17:00–19:00	<b>How Does Tissue Remodeling Influence Disease Phenotype?</b> <a href="#">Registered attendees</a> can view abstracts starting on 01/12/2017  * <b>Steve Georas</b> , University of Rochester Medical Center, USA  <b>James G. Martin</b> , McGill University, Canada <i>Airway Smooth Muscle Hypercontractility in Asthma</i>  <b>Jeffrey A. Whitsett</b> , Cincinnati Children's Hospital Medical Center, USA <i>Transcriptional Networks Linking Goblet Cell Differentiation and Innate Immunity in the Pathogenesis of Asthma</i>  <b>Philip Hansbro</b> , University of Newcastle, Australia <i>Understanding Pathogenesis to Develop New Therapies for Severe Asthma</i>  <b>Mikael Adner</b> , Karolinska Institutet, Sweden <i>Short Talk: Interleukin-13 Induces Glucocorticoid-Insensitive Hyperreactivity of Human Small Airways</i>	<a href="#">Arapahoe</a>

19:00–20:00	<b>Social Hour with Lite Bites</b> No registration fees are used to fund alcohol served at this function.	<a href="#">Divide &amp; Ten Mile</a>
19:30–22:00	<b>Poster Session 3</b>	<a href="#">Divide &amp; Ten Mile</a>

**THURSDAY, FEBRUARY 16**

07:00–08:00	<b>Breakfast</b>	<a href="#">Divide &amp; Ten Mile</a>
08:00–11:15	<b>Biomarkers for Personalized Treatment</b> <a href="#">Registered attendees</a> can view abstracts starting on 01/12/2017  * <b>Roland W. Kolbeck</b> , MedImmune, LLC, USA  <b>Joseph R. Arron</b> , Genentech, Inc., USA <i>The Virtuous Cycle: Biomarkers and Translational Research in Asthma Drug Development</i>  <b>David Beebe</b> , University of Wisconsin, USA <i>Potential of Microfluidic Technology to Identify Biomarkers of Specific Disease Phenotypes</i>  <b>Coffee Break</b>  <b>Peter Ghazal</b> , University of Edinburgh, UK <i>The Inflammatory Response in Early Life</i>  <b>Erin Duncan Gordon</b> , University of California, San Francisco, USA <i>Genetic Biomarkers to Guide Precision Medicine in Asthma: IL1RL1 Asthma Risk Variants</i>  <b>Sudipto Saha</b> , Bose Institute, India <i>Short Talk: Plasma Apolipoproteins - Potential Biomarkers in Atopic Asthma Based on LC-MS/MS Study</i>  <b>Anna J. James</b> , Karolinska Institutet, Sweden <i>Short Talk: Local and Systemic Periostin Levels Reflect Different Processes of Relevance to Asthma</i>	<a href="#">Arapahoe</a>
11:15–14:30	<b>On Own for Lunch</b>	
14:30–16:30	<b>Workshop 2: Modeling Complex Diseases in vivo and in vitro</b>  * <b>Joshua A. Boyce</b> , Brigham and Women's Hospital, Harvard Medical School, USA  <b>Tibor Z. Veres</b> , University of Turku, Finland <i>Allergen-Induced CD4+ T-Cell Cytokine Production within Airway Mucosal DC-T-Cell Clusters Drives the Local Recruitment of Myeloid Effector Cells</i>  <b>Daniel Camacho</b> , University of Chicago, USA <i>IRF4(+) Dendritic Cells Promote Th2 Initiation in Response to Allergen</i>  <b>Sangwoon Chung</b> , Ohio State University, USA <i>FoxO1, A Potential Link Player Between Alternatively Activate Macrophages and Asthmatic Lung inflammation</i>  <b>Stokes Peebles</b> , Vanderbilt University Medical Center, USA <i>Glucagon Like Peptide-1 Receptor Signaling Inhibits Both Lung Innate and Adaptive Immunity Mediated Allergic Inflammation to Inhaled Aeroallergen</i>  <b>Nora A. Barrett</b> , Brigham and Women's Hospital, USA <i>LTE4/GPR99 Regulation of Respiratory Epithelial Cell Function</i>  <b>Heleen Vroman</b> , Erasmus MC, Netherlands <i>TNFAIP3 Levels in Lung Dendritic Cells Instruct Th2 or Th17 Cell Differentiation in Eosinophilic or Neutrophilic Asthma</i>	<a href="#">Arapahoe</a>

16:30–17:00	<b>Coffee Available</b>	<a href="#">Gallery</a>
17:00–18:45	<b>Doing Better Going Forward</b> <a href="#">Registered attendees</a> can view abstracts starting on 01/12/2017  * John V. Fahy, University of California, San Francisco, USA  * Clare M. Lloyd, Imperial College London, UK  Steven M. Rowe, University of Alabama at Birmingham, USA <i>Transformative Treatments - How the Cystic Fibrosis Community Did It</i>  Jennifer Davidson Hamilton, Regeneron Pharmaceuticals, Inc., USA <i>Targeted Therapeutics: What Have They Taught Us About Pathomechanisms in Asthma?</i>  Sally Wenzel-Morganroth, University of Pittsburgh, USA <i>Evolving Phenotypes to Endotypes: Is Precision Medicine Achievable in Asthma?</i>	<a href="#">Arapahoe</a>
18:45–19:00	<b>Meeting Wrap-Up: Outcomes and Future Directions (Organizers)</b> <a href="#">Registered attendees</a> can view abstracts starting on 01/12/2017	<a href="#">Arapahoe</a>
19:00–20:00	<b>Social Hour with Lite Bites</b> No registration fees are used to fund alcohol served at this function.	<a href="#">Divide &amp; Ten Mile</a>
20:00–23:00	<b>Entertainment</b> Entertainment is not subsidized by conference registration fees nor any U.S. federal government grants. Funding for this expense is provided by other revenue sources.	<a href="#">Divide &amp; Ten Mile</a>

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**FRIDAY, FEBRUARY 17**


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**Departure**

\*Session Chair †Invited, not yet responded.

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