

# KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

## Translational Systems Immunology (A9)

January 28-February 1, 2018 • Snowbird Resort • Snowbird, Utah, USA

Scientific Organizers: Sally John, Soumya Raychaudhuri, Michael Vincent and Mark M. Davis

Supported by the Directors' Fund

Abstract & Scholarship Deadline: October 2, 2017 / Abstract Deadline: October 31, 2017 / Discounted Registration Deadline: November 30, 2017

### SUNDAY, JANUARY 28

#### Arrival and Registration

### MONDAY, JANUARY 29

#### Welcome and Keynote Address

**Sarah Teichmann**, Wellcome Trust Sanger Institute, UK  
*Understanding Cellular Heterogeneity*

#### Human Phenotypic Validation via Rare Genetic Mutations

##### Speaker to be Announced

**Helen C. Su**, NIAID, National Institutes of Health, USA  
*Elucidating Molecular Mechanisms of Newly Defined Inherited Immunological Diseases*

**Hakon Hakonarson**, Children's Hospital of Philadelphia, USA  
*Exome Sequencing to Diagnose and Treat Pediatric Immune Disease*

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

#### Workshop 1: Friendly Debate

##### Short Talks Chosen from Abstracts

#### Genetics and Epigenetics Variation in Human Immune Traits

**Julian C. Knight**, University of Oxford, UK  
*Genetic and Epigenetic Effects Influencing Monocyte Activation in Healthy Humans*

##### Speaker to be Announced

**Nicole Soranzo**, Wellcome Trust Sanger Institute, UK  
*Human Genetic Variation of Hematological Parameters*

##### Short Talk Chosen from Abstracts

#### Poster Session 1

### TUESDAY, JANUARY 30

#### Advancing our Understanding of Immune Cell Repertoires

**Aleksandra Walczak**, Ecole Normale Supérieure, France  
*Diversity of Immune Receptor Repertoires*

**Mark M. Davis**, Stanford University, USA  
*T-Cell Repertoires and How to Read Them*

**Harlan Robins**, Fred Hutchinson Cancer Research Center, USA  
*High Throughput T and B-Cell Receptor Sequencing*

**George Georgiou**, University of Texas at Austin, USA  
*The Serological and BCR Antibody Repertoires in Aging*

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

#### Integrative Analysis, Dynamic Networks and Systems Immunology

**Charlie Kim**, Verily, USA  
*Systems Approaches to Normal and Dysregulated Immune Function*

##### Speaker to be Announced

**Kasper Lage**, Massachusetts General Hospital, USA  
*Human Gene and Protein Networks Perturbed by Genetics to Identify Therapeutics*

##### Short Talk Chosen from Abstracts

#### Poster Session 2

### WEDNESDAY, JANUARY 31

#### Systems Immunology at the Tissue Level

**Betty Diamond**, Feinstein Institute for Medical Research, USA  
*Molecular Analysis of Affected Tissue in Systemic Lupus Erythematosus*

**Soumya Raychaudhuri**, Brigham and Women's Hospital, Harvard Medical School, USA

*Single Cell Sequencing in Rheumatoid Synovial Tissue*

**Carolyn B. Coyne**, University of Pittsburgh, USA  
*Immunology of the Human Placenta*

**Elham Azizi**, Memorial Sloan Kettering Cancer Center, USA  
*Computational Approaches to Understanding Cellular Heterogeneity*

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

#### Human Immune Response to Infectious Disease

**Bali Pulendran**, Emory University, USA  
*Microbiome and B-Cell Responses*

**Wendy Broom**, Genocea Biosciences, USA  
*Developing the Next Generation of Malaria Vaccines*

**Purvesh Khatri**, Stanford University, USA  
*Adventures of a "Data Parasite": Translational Medicine using Heterogeneous Public Data*

##### Short Talk Chosen from Abstracts

#### Poster Session 3

### THURSDAY, FEBRUARY 1

#### Immuno-Oncology from Basic Science to Clinical Practice

**Shannon J. Turley**, Genentech, Inc., USA  
*Leukocyte Function and Positioning in Diverse Stromal Niches*

##### Speaker to be Announced

**Catherine Ju-Ying Wu**, Dana-Farber Cancer Institute, USA  
*Genomic and Epigenomic Heterogeneity in Chronic Lymphocytic Leukemia*

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

#### Workshop 2: CyTOF

##### Short Talks Chosen from Abstracts

#### Clinical Immunoprofiling and Patient Stratification

**Holden T. Maecker**, Stanford School of Medicine, USA  
*Comprehensive Immune Profiling and Functional Analysis of Human Aging / Response to Therapy*

**Michael Vincent**, Pfizer, USA  
*Exploratory Molecular Analysis in Phase II Lupus Trials*

**Alexandra Snyder**, Memorial Sloan Kettering Cancer Center, USA  
*Genetic Basis for Clinical Response to CTLA4 Blockade in Melanoma*

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**Sally John**, Biogen, USA

*A Network Approach to the Role of the Innate Immune System in Neurodegenerative Disease*

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

**FRIDAY, FEBRUARY 2**

**Departure**