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

Sponsored by AstraZeneca and Bioverativ Therapeutics

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 Diagnosis 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

Speaker to be Announced

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 Inc., 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