ITI Human Immune Monitoring Technology and Bioinformatics Conference
Sponsored by the Center for Human Systems Immunology (PD: Mark M. Davis)
Organizing Committee: Catherine Blish, Purvesh Khatri & Bali Pulendran

Thursday, May 2nd - Friday May 3rd 2019, Berg Hall, Li Ka Shing Center, Stanford

Thursday, May 2, 2019
07:30–08:30 BREAKFAST

08:30–08:45 Welcome & Opening Remarks
Lynda Stuart, MD,PhD, Bill and Melinda Gates Foundation
Mark Davis, PhD, Bali Pulendran, PhD, Catherine Blish, MD,PhD, Purvesh Khatri, PhD, Stanford

Session Chair: Bali Pulendran, PhD
08:50–09:15 Bruce Walker, MD, Ragon Institute of MGH, MIT and Harvard
Prospects for a T-Cell Mediated Functional Cure of HIV Infection

09:20–09:45 Justin Sonnenburg, PhD, Stanford
Establishing the Diet-Microbiome-Immune Axis in Humans

09:50–10:15 Carolyn Bertozzi, PhD, Stanford
Chemical Technologies for Infectious Disease Diagnostics

10:20–10:45 Olivier Gevaert, PhD, Stanford
Multi-Scale Modeling to Study Complex Diseases

10:50–11:05 COFFEE BREAK

11:05–11:30 Nima Aghaeepour, PhD, Stanford
Multiomics Analysis of Term and Preterm Human Pregnancy

11:35–12:00 Petter Brodin, MD, PhD, Karolinska Institute
Shaping of Human Immune Systems by Environmental Factors Early in Life

12:05–12:30 Nathan Price, PhD, Institute for Systems Biology, Seattle
Longitudinal Multi-omic Profiling for Thousands of People

12:30–01:30 LUNCH & POSTER VIEWING

Session Chair: Purvesh Khatri, PhD
01:30–01:55 Mike Snyder, PhD, Stanford
Big Data and Health

02:00–02:25 William Shih, PhD, Harvard
HiFi Molecular Transmission via Crisscross Cooperativity
02:30–02:55  X. Shirley Liu, PhD, Dana-Farber Cancer Institute
Hidden Immunology Signals in Tumor RNA-seq

03:00–03:15  COFFEE BREAK & POSTER VIEWING

03:15–03:40  Crystal Mackall, MD, Stanford
Engineering T Cells for Cancer Therapy

03:45–04:10  Evan Newell, PhD, Fred Hutchinson Cancer Research Center
Decomposing Disease Associated T cell Responses Using Mass Cytometry

04:15–04:40  Ami Bhatt, MD, PhD, Stanford
Genomic Approaches to Decipher Microbial Contributions to Health and Disease

04:45–05:05  Somuya Raychaudhari, MD, Harvard Broad Institute
Defining the Architecture of Rheumatoid Arthritis at the Single Cell Level

05:10–06:30  RECEPTION AND POSTER SESSION

Friday, May 3, 2019

08:00–08:30  BREAKFAST

Session Chair: Mark M. Davis, PhD

08:30–08:55  Alexander Drakesmith, University of Oxford, MRC Wheatherall Institute
Iron powers adaptive immunity: implications for vaccinations

09:00–09:25  Sarah Fortune, MD, Harvard
Single Cell RNAseq Analysis of TB Granulomas: Defining Therapeutic Challenges

09:30–09:55  Yueh-hsiu Chien, PhD, Stanford
A Multi-Cohort Study of the Immune Factors Associated with M. Tuberculosis Infection Outcomes

10:00–10:25  H. Tom Soh, PhD, Stanford
Multiplexed Protein Measurements with High Sensitivity and Resolution

10:25–10:40  COFFEE BREAK & POSTER VIEWING

10:40–11:05  Mark M. Davis, PhD
Tools for T cells

11:10–11:35  Nir Yosef, PhD, UC Berkley
Metabolic Modeling with Single-Cell RNA-Seq Reveals Actionable Targets in Autoimmunity

11:40–12:05  Rhiju Das, PhD, Stanford
Inexpensive Diagnostics for Ratiometric Gene Signatures through Designer Riboswitches

12:10–01:10  LUNCH
**Session Chair: Catherine Blish, MD, PhD**

01:10–01:35  Andrea Radtke, PhD, NIH  
*Advanced Optical Imaging Approaches to Understand Human Immunity in a Tissue Context*

01:40–02:05  Garry Nolan, PhD, Stanford  
*Pathology from the Molecular Scale on Up*

02:10–02:35  William Greenleaf, PhD, Stanford  
*Integrative, multiomic, single-cell dissection of Mixed-Phenotype Acute Leukemia.*

02:40–03:05  Manu Prakash, PhD, Stanford  
*Title TBA*

03:10–03:25  COFFEE BREAK

03:25–03:50  Elizabeth Egan, MD, PhD, Stanford  
*New Approaches to Discover Host Erythrocyte Factors for Malaria*

03:55–04:20  Kari Nadeau, MD, PhD, Stanford  
*Studying Immunological Mechanisms to Try to End Food Allergy*

04:25–04:50  Rosa Bacchetta, MD, Stanford  
*New Approaches to Dissect Immune Dysregulation in Children with Genetic Immune Diseases*

04:55–05:20  Steven Deeks, MD, UCSF  
*Towards and HIV Cure: Untangling the Immunology of HIV Persistence during Antiretroviral Therapy*

05:25–05:30  Closing Remarks, Mark Davis, PhD, Stanford