**Third ITI Human Immune Monitoring Technology and Bioinformatics Conference**

**Monday, March 27 – Tuesday, March 28, 2023**

**Stanford Hospital, 500P Assembly Hall, 500 Pasteur Dr, Palo Alto, CA 94304**

Sponsored by Center for Human Systems Immunology  
(PD: Mark M. Davis, PhD)

Organizing Committee: Catherine Blish, MD, PhD,  
Purvesh Khatri, PhD &  
Bali Pulendran, PhD

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**Monday, March 27**

08:00-09:00 **BREACKFAST**

09:00–09:15 **Welcome & Opening Remarks**  
Mark Davis, Catherine Blish, Purvesh Khatri, Bali Pulendran

**Infectious Diseases Section 1: Moderator Catherine Blish**

09:20-09:40 **Catherine Blish, MD, PhD, Stanford University:** How SARS-CoV-2 escapes from natural killers

09:45–10:05 **Pras Jaganathan, MD, Stanford University:** Immunologic consequences of early life malaria exposure

10:10–10:30 **Rafick Sekaly, PhD, Emory:** Inflammation: a driver or an impediment to the protective response to vaccination and infections

10:35–10:55 **Alessandro Sette, PhD, La Jolla Institute:** Profiling human T cell responses in health and disease

11:00–11:15 **COFFEE BREAK**

11:15–11:35 **Taia Wang, MD, PhD, Stanford University:** Antibody signaling in lung immunity

**Vaccine Section: Moderator Bali Pulendran**

11:40–12:00 **Nadine Rouphael, MD, Emory University:** Variant Vaccines for COVID-19  
COVID-19 Variant Immunologic Landscape Trial (COVAIL)

12:05-12:25 **Musa Mhlanga, PhD, Radboud University Medical Centre Nijmegen, Netherlands:** The Epigenetics of Innate immune Memory
12:30-01:15  **LUNCH**

01:15-01:35  **Ali Ellebedy, PhD, Wash U:** The Chronicles of Germinal Center B cell Response to Vaccination in Humans

01:40–02:00  **Michael Fischbach, PhD, Stanford:** Understanding and manipulating immune modulation by the microbiome

02:05–02:25  **Peter Kim, PhD, Stanford:** Towards a pan-SARS-CoV vaccine

02:30–02:50  **Neil King, PhD, Institute of Protein Design, U of Washington:** Computational design of mRNA-launched protein nanoparticle vaccines

02:55–03:15  **Bali Pulendran, PhD, Stanford:** Systems biological analysis of immune responses to vaccination in humans

03:20–03:40  **Nancy Sullivan, ScD, National Emerging Infectious Diseases Laboratories (NEIDL), Boston University:** Approaches to Achieve Antibody Breadth Against SARS CoV-2

03:45–04:00  **COFFEE BREAK**

**Systems Immunology Section: Moderator Tobias Lanz**

04:00–04:20  **Shai Shen-Orr, PhD, Technion:** Immune aging – implications and monitoring

04:25–04:45  **Jim Heath, PhD, Institute for Systems Biology:** The kinetics and biology of antigen-paired CD8+ T cell clonotypes

04:50–05:10  **Alexis Combes, PhD, UCSF:** Discovering the recurring patterns of the immune system in cancer and uncovering strategies to promote anti-tumor immunity

05:15–05:35  **Tobias V. Lanz, MD, Stanford University:** The B Cell Repertoire in Multiple Sclerosis Reveals Molecular Mimicry between EBV EBNA1 and GliaCAM

05:45–07:00  **Posters and Cocktail Reception**
<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker(s)</th>
<th>Title</th>
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<tbody>
<tr>
<td>09:00</td>
<td>Anne O’Garra, PhD, Crick Institute</td>
<td>Transcriptional signatures reveal the immune response underly progress and pathogenesis in tuberculosis</td>
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<td>09:25</td>
<td>Purvesh Khatri, PhD, Stanford</td>
<td>What can host response-based diagnostic do in clinical practice?</td>
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<td>09:50</td>
<td>Michael Angelo, MD, PhD, Stanford</td>
<td>Building a comprehensive cell atlas of tuberculosis in humans</td>
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<td>10:15</td>
<td>Bob Seder, MD, NIAID, Stanford</td>
<td>Scientific and Clinical Development of Monoclonal Antibodies to Prevent Malaria</td>
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<td>10:40</td>
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<td>BREAK</td>
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<tr>
<td>11:00</td>
<td>Joanne Flynn, PhD, U of Pittsburgh</td>
<td>Deep dive into tuberculosis granulomas</td>
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<td>11:25</td>
<td>Chetan Seshadri, U of Washington</td>
<td>T cell signatures of bacterial clearance among M. tuberculosis ‘resisters'</td>
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<td>11:50</td>
<td>Yueh-Hsiu Chien, PhD, Stanford University</td>
<td>Antigen-expanded CD8+ gamma delta T cells with NK-like phenotype and function respond in persistent infection</td>
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<td>12:15</td>
<td>Hawa Racine Thiam, PhD, Stanford University</td>
<td>Cellular Biophysics of Neutrophils Functions: Learning from NETosis</td>
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<td>12:40</td>
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<td>LUNCH</td>
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<td>01:15</td>
<td>Garry Nolan, PhD, Stanford University</td>
<td>Cancer rearranges the rules in tissue building blocks. A new class of targets for therapy</td>
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<td>01:40</td>
<td>Holden Maecker, PhD, Stanford University</td>
<td>Single-cell multi-omics and other new technologies in the HIMC</td>
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<td>02:05</td>
<td>Evan Newell, PhD, Fred Hutch</td>
<td>Recirculating tumor-specific T cell responses as biomarkers for virally driven cancers</td>
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02:30-02:50  Juliana Idoyaga, PhD, Stanford: Basis of human dendritic cell heterogeneity unraveled by high-dimensional analyses

02:55-03:15  BREAK

03:15-03:35  Jen Dionne, PhD, Stanford: VISMO: a new platform for label-free single-cell phenotyping

03:40-04:00  Shirit Einav, MD, Stanford University: Global and cell type-specific immunological hallmarks of severe dengue progression

Organoid Section  Moderator: Mark Davis

04:05-04:25  Calvin Kuo, MD, PhD, Stanford University: Multilineage organoid models of human disease

04:30-04:50  Lisa Wagar, PhD, UC Irvine: Tracking adaptive immune response dynamics to distinct vaccine modalities using human immune organoids

04:55-05:15  Mark M. Davis, PhD, Stanford University: Immune organoids to understand normal and abnormal human immune responses in vitro

05:20-05:30  CLOSING REMARKS