Signal Transduction in the Immune System
June 18 – 23, 2017
Snowmass, CO

Co-Organizers:

Daniel Billadeau
Mayo Clinic
Rochester, MN

Art Weiss
University of California, San Francisco
San Francisco, CA

Janis K. Burkhardt
Children’s Hospital of Philadelphia
Philadelphia, PA

Morgan Huse
Memorial Sloan Kettering Cancer Center
New York, NY

Sunday, June 18, 2017
4:00PM – 9:00PM  Conference Registration
6:00PM – 7:00PM  FASEB Opening Reception
7:00PM – 8:30PM  Dinner
8:45PM – 10:00PM  **Keynote Speaker:** Doreen Cantrell, University of Dundee, Dundee, Scotland, GBR. “Environment Sensing Signaling Pathways in T Cells”
Monday, June 19, 2017
7:30AM – 9:00AM  
Breakfast

Session 1:  
9:00AM – 12:15PM  
**Signaling in Innate Immune Cells**  
Chair, Andre Veillette, Clinical Research Unit of Montreal, Montreal, QC

9:00AM – 9:15AM  
Welcome from FASEB

9:15AM - 9:45AM  
Andre Veillette: Clinical Research Unit of Montreal, Montreal, QC  
“SLAM Family Receptors in Innate Immunity”

9:45AM -10:15AM  
Greg Barton: University of California at Berkeley, Berkeley, CA  
“Nucleic Acid Recognition by Toll-Like Receptors”

10:15AM – 10:30AM  
Tanya Freedman: University of Minnesota, Mpls, MN  
“Modulation of the LynA Checkpoint Helps set the Response Threshold in Autoinflammatory Macrophages”

10:30AM – 11:00AM  
FASEB Sponsored Coffee Break

11:00AM – 11:30AM  
Paula Oliver: Children’s Hospital of Philadelphia, Philadelphia, PA  
“Regulation of T Cell Signaling and Function by the Ubiquitin Pathway”

11:30AM – 12:00PM  
Mike Lenardo: NIAID, Bethesda, MD  
“New Concepts in T Cell Signaling”

12:00PM – 12:15PM  
K. Senger: Genentech, S. San Francisco, CA  
“The Kinase TPL2 Activates ERK and p38 Signaling to Promote Neutrophilic Inflammation”

12:15PM – 1:30PM  
Lunch

12:15PM – 1:30PM  
**Meet the Expert** (Drs. Cantrell, Veillette, and Lenardo)

**Free Afternoon**

4:00PM – 6:00PM  
Poster Session 1 (Abstracts, even numbered)

6:00PM – 7:00PM  
Dinner

Session 2:  
7:00PM – 9:45PM  
**Intracellular Detection Systems/Signaling in Innate Cells**  
Chair, Hao Wu, Harvard Medical School, Boston, MA

7:00PM - 7:30PM  
Jenny Ting: University of North Carolina, Chapel Hill, NC  
“Inhibitory NLRs and Their Impact on Signal Transduction, Inflammation and the Microbiome”
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details</th>
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<tbody>
<tr>
<td>7:30PM – 8:00PM</td>
<td>James Chen: University of Texas Southwestern Medical Center, Dallas, TX “Immune and Autoimmune Response to Cytosolic DNA”</td>
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<td>8:00PM – 8:15PM</td>
<td>Takashi Saito: Osaka University, Osaka, Japan “Regulation of T Cell Activation and Function by Innate Signals – STING Activation in T Cells Induce Growth Arrest and IFN Production”</td>
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<td>8:15PM – 8:30PM</td>
<td>Coffee Break</td>
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<tr>
<td>8:30PM – 8:45PM</td>
<td>Mohammad Samie: Genentech, S. San Francisco, CA “Autophagy Controls Inflammation by Regulating TRIF-Mediated Signaling”</td>
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<td>8:45PM – 9:15PM</td>
<td>Ezra Burstein: University of Texas Southwestern Medical Center, Dallas, TX. ”RNA:DNA Hybrids and the Regulation of Anti-Viral Immunity”</td>
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<td>9:15PM – 9:45PM</td>
<td>Hao Wu: Harvard Medical School, Boston, MA “Structural Insights into Innate Immune Sensing Mechanisms”</td>
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**Tuesday, June 20, 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details</th>
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<tr>
<td>7:30AM – 8:30AM</td>
<td>Breakfast</td>
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**Session 3**

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<th>Time</th>
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<tr>
<td>8:30AM – 12:00PM</td>
<td><strong>Receptor – Ligand Recognition/Mechano-Transduction</strong> Chair, Janis K. Burkhardt: Children’s Hospital of Philadelphia, Philadelphia, PA</td>
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<tr>
<td>9:00AM - 9:30AM</td>
<td>Lance Kam: Columbia University, New York, NY &quot;Force Generation and Mehanosensing in T Cells&quot;</td>
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<tr>
<td>9:30AM -10:00AM</td>
<td>Janis K. Burkhardt: Children’s Hospital of Philadelphia, Philadelphia, PA &quot;Cytoskeletal Crosstalk at the Immunological Synapse“</td>
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<tr>
<td>10:00AM – 10:15AM</td>
<td>John Hammer: Cell Biology and Physiology Center, NHLBI Bethesda, MD &quot;Formin-Generated Actomyosin Arcs Propel T Cell Receptor Microcluster Movement at the Immune Synapse“</td>
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<tr>
<td>10:15AM – 10:45AM</td>
<td>GROUP PHOTO &amp; FASEB Sponsored Coffee Break</td>
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<tr>
<td>10:45AM – 11:15AM</td>
<td>Morgan Huse: Memorial Sloan Kettering Cancer Center, New York, NY &quot;Architectural Regulation of T Cell Cytotoxicity“</td>
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<td>11:15AM – 11:45PM</td>
<td>Erin Adams: University of Chicago, Chicago, IL “Antigen Presentation by Nonclassical MHC Molecules“</td>
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<tr>
<td>11:45AM – 12:00PM</td>
<td>Sudha Kumari: MIT, Boston, MA “Specialized Actin Architecture Mechanically Tunes T Cell Synaptic Contact Lifetime“</td>
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</table>
12:15PM – 1:30PM Lunch

12:15PM – 1:30PM Meet the Expert (Drs. Ting, Burkhardt and Huse)

1:00PM – 3:00PM Career-Oriented Workshop – Impact Careers Outside Academia
1:00PM – 1:10PM Conrad Mallia: Program Officer – NIAID, Bethesda, MD “Navigating the NIH and the NIAID”
1:10PM – 1:20PM John Foley: Editor – Science Signaling “A Career in Scientific Publishing”
1:20PM – 1:30PM Andrey Shaw: Staff Scientist – Genentech, S. San Francisco, CA “The Good, the Bad and the Ugly: Comparing Careers in Academia with Industry”
1:30PM – 1:40PM Kathy Brumbaugh: Scientist – Biotechne, Mpls, MN “Research Group Management in the Biological Sciences: An Industrial Perspective”
1:40PM – 3:00PM Group Discussion with Workshop Panel

Free Afternoon

4:00PM – 6:00PM Poster Session 2 (Abstracts, odd numbered)
6:00PM – 7:00PM Dinner

Session 4: Signaling in Immune Cells I
7:00PM – 9:45PM Chair, Rose Zamoyska: University of Edinburgh, Edinburgh, UK

7:00PM - 7:30PM Facundo Batista: Ragon Institute, Boston, MA “B Cell Activation Induces a Switch from Canonical to non-Canonical Autophagy that Shapes B Cell Fate”

7:30PM – 8:00PM Rose Zamoyska: University of Edinburgh, Edinburgh, UK “Regulation of T Cell Activation by TCR-Proximal Signaling Molecules”

8:00PM – 8:15PM Michelle Krogsgaard: NYU School of Medicine, New York, NY “Structural Determinants of TCR Signal Initiation”

8:15PM – 8:30PM Coffee Break

8:30PM – 8:45PM Michael Kuhns: University of Arizona, Tucson, AZ “Evidence for Reciprocal Interactions Between the TCR-CD3 Complex and CD4 Around a Nucleating pMHCII”
8:45PM – 9:15PM  
Art Weiss: University of San Francisco, San Francisco, CA  
“Regulation of TCR Basal and Inducible Signaling by ZAP-70”

9:15PM – 9:45PM  
Leslie Berg: University of Massachusetts, Worcester, MA  
“Itk Regulation of T Cell Activation”

Wednesday, June 21, 2017
7:30AM – 8:30AM  
Breakfast

Session 5  
**Signaling in Immune Cells II**

**8:30AM – 12:00PM**  
Chair, Gillian Griffiths: Cambridge University, Cambridge, UK

9:00AM – 9:30AM  
Larry Samelson: NCI, Bethesda, MD  
“LAT Dynamics: Early and Late”

9:30AM – 10:00AM  
Chris Garcia: Stanford University, Stanford, CA  
“Tunable Signaling by T Cell and Cytokine Receptors”

10:00AM – 10:15AM  
Qianru Wei: National University of Singapore, Singapore, SGP  
“Role of Free and Coreceptor-Bound Lck in Thymocytes and Peripheral CD8 T Cells”

10:15AM – 10:45AM  
FASEB Sponsored Coffee Break

10:45AM – 11:15AM  
Gillian Griffiths: Cambridge University, Cambridge, UK  
“Fine Tuning CTL Killing”

11:15AM – 11:45PM  
Tatiana Baldari: University of Siena, Siena, Italy  
“The Intraflagellar Transport System: A Pleiotropic Regulator of Intracellular Trafficking in T Cells”

11:45AM – 12:00PM  
Doug Tischer: University of San Francisco, San Francisco, CA  
“Titrating Signal Strength and Ligand Kinetics Through Optogenetic Activation of the T Cell Signaling Pathway”

12:00PM – 12:30PM  
**Business Meeting**

12:30PM – 1:30PM  
Lunch

12:30PM – 1:30PM  
**Meet the Expert** (Drs. Griffiths, Samelson and Berg)

4:00PM – 6:00PM  
Poster Session 3 (Abstracts, all presented)

6:00PM – 7:00PM  
Dinner
Session 6: Systems Biology of Signaling
7:00PM – 9:45PM
Chair, Arup Chakraborty: Massachusetts Institute of Technology, Boston, MA

7:00PM - 7:30PM
Bernard Malissen: CML, Marseille-Luminy “Interactomics of the TCR Signaling Network”

7:30PM – 8:00PM
Thorsten Mempel: Massachusetts General Hospital, Boston, MA "Dynamics of T cell Signaling in the Tumor Microenvironment"

8:00PM – 8:15PM
Anna Lippert: University of Cambridge, Cambridge, UK “Antibody Superagonism: an Exemplar of the Kinetic-Segregation Principle of T-Cell Signaling”

8:15PM – 8:30PM
Coffee Break

8:30PM – 8:45PM
Jeroen Roose: University of San Francisco, San Francisco, CA “Alternate ZAP70-P38 Signals Prime a Classical P38 Pathway Through LAT and SOS to Support Regulatory T Cell Differentiation”

8:45PM – 9:15PM
Gregoire Altan-Bonnet: NCI, Bethesda, MD. “Lymphocytes Speaking to Lymphocytes, the Math, the Noise & the Long Shadow”

9:15 PM – 9:45PM
Arup Chakraborty: Massachusetts Institute of Technology, Boston, MA “The Role of Feedback Regulation in the Initiation of TCR Signaling”

Thursday, June 22, 2017
7:30AM – 8:30AM
Breakfast

Session 7 Immune Deficiencies, Malignancies and Infections
8:30AM – 12:00PM
Chair, Josh Milner: NIAID, Bethesda, MD

9:00AM – 9:30AM
Josh Milner: NIAID, Bethesda, MD “Leukocyte Signaling Defects in Immune Dysregulation Disorders”

9:30AM – 10:00AM
Markus Muschen: University of California San Francisco, San Francisco, CA "Clonal Selection in B Cell Development and Leukemia”

10:00AM – 10:15AM
Eugenio Bustos-Moran: CNIC, Madrid, Spain “MAP4 Balances T Cell Activation: Control on Positive and Negative Regulators”

10:15AM – 10:45AM
FASEB Sponsored Coffee Break
10:45AM – 11:15AM  Cliff Lowell: University of San Francisco, San Francisco, CA, "Cross-Talk Between Tyrosine Kinase and TLR Signaling Pathways in Dendritic Cells"

11:15AM – 11:45AM  Fotini Gourani: University of Chicago, Chicago, IL "Beta-Catenin Signaling in T Cells: Immunology and Immuno-Pathology"

11:45AM – 12:00PM  Jordan Jacobelli: University of Colorado School of Medicine, Aurora, CO “Ena/Vasp Proteins Selectively Regulate Activated T Cell Trafficking in vivo by Mediating Transendothelial Migration”

12:15PM – 1:30PM  Lunch

12:15PM – 1:30PM  Meet the Expert (Drs. Lowell, Malissen, and Gourani)

12:00PM – 6:00PM  Optional Organized Group Activity – White Water Rafting

6:00PM – 7:00PM  Dinner

Session 8: 7:00PM – 9:45PM  Therapeutic Strategies in Response to Tumors
Morgan Huse, Memorial Sloan Kettering Cancer Center, New York, NY

7:00PM - 7:30PM  Peter Berglund: Immune Design, Seattle, WA. “The effects of the TLR4 agonist Glucopyranosyl Lipid A (GLA) on gene expression in the tumor microenvironment”

7:30PM – 8:00PM  Enfu Hui: UCSD, San Diego, CA "Mechanism of PD-1 Signaling: New Insights from Membrane Reconstitution"

8:00PM – 8:15PM  En Cai: UCSF, San Francisco, CA “Visualizing Dynamic Microvillar Search and Stabilization During Ligand Detection by T Cells:

8:15PM – 8:30PM  Break

8:30PM – 8:45PM  Adam Mor, NYU, New York, NY “Affinity Purification Mass Spectrometry Analysis of PD-1 Uncovers New Checkpoint Modulators”

8:45PM – 9:15PM  Kole Royball: University of California San Francisco, San Francisco, CA "Hacking Immune Cells with Synthetic Notch Receptors to Expand Their Therapeutic Potential"
Andrea Schietzinger, Memorial Sloan Kettering Cancer Center, New York, NY “Mechanisms Defining Tumor-Specific T Cell Differentiation, Dysfunction and Therapeutic Reprogrammability”

**Friday, June 23, 2017**

7:30AM – 11:30AM  Breakfast and Departure

**END OF CONFERENCE**

For additional information contact:

FASEB Science Research Conferences  
9650 Rockville Pike  
Bethesda, MD 20814

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