

Center for the Study of Inflammatory Bowel Disease  
23<sup>rd</sup> Annual Workshop

**Signaling, Circuits and Communication  
in Health and Disease  
November 15 – 16, 2013**

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**November 15, 2013**

7:30 - 7:55                      Registration and Continental Breakfast  
Opening Remarks  
                                        Ramnik J. Xavier, M.D., Director, CSIBD

**Session I:                      SIGNALING DURING INFLAMMATION**

Moderators: Gail Hecht, M.D., and Thaddeus S. Stappenbeck, M.D., Ph.D.

8:00 – 8:20                      ***Ectonucleotidases, Regulatory T Cells and the Conditioning of Vascular and Immune Responses in Inflammatory Bowel Disease***  
Simon Robson, M.D., Ph.D., Beth Israel Deaconess Medical Center, Boston, MA

8:25 – 8:45                      ***NOD2 Signaling in Spontaneous Models of Ileitis***  
Fabio Cominelli, M.D., Ph.D., University Hospitals Case Medical Center, Cleveland, OH

8:50 – 9:10                      ***Immune-mediated Disease Associated Variants Affect Long Non-coding RNA Expression***  
Cisca Wijmenga, Ph.D., University of Groningen, The Netherlands

9:15 – 9:35                      ***BACH2 Represses Effector Programs to Stabilize Treg-Mediated Immune Homeostasis***  
John O'Shea, M.D., NIH, Bethesda, MD

9:40 – 9:55                      ***Microtubule-Dependent Sensing of Nucleic Acids for Antiviral Host Defenses***  
Hans-Christian Reinecker, M.D., Massachusetts General Hospital, Boston, MA

10:00 – 10:15                      **BREAK**

**Session II:                      ADAPTIVE SIGNALS AND IMMUNITY**

Moderators: Bana Jabri, M.D., Ph.D., and Stephen James, M.D.

10:20 – 10:40                      ***Ahr Signaling in Intestinal Immunity***  
Marco Colonna, M.D., Washington University School of Medicine, St. Louis, MO

10:45 – 11:05                      ***B vs DC: How to Activate T in SLE***  
Mark Shlomchik, M.D., Ph.D., University of Pittsburgh, Pittsburgh, PA

11:10 – 11:30                      ***Thymus Voltage-Gated Channels and T Cell Immunity***  
Paul Allen, Ph.D., Washington University School of Medicine, St. Louis, MO

11:35 – 11:55                      ***Randomly Made Yet Ordered: New Perspectives on T cell Receptor Repertoires Revealed by High-Throughput Sequencing***  
Nir Friedman, Ph.D., Weizmann Institute of Science, Rehovot, Israel

12:00 – 12:15 **Q & A**

12:15 – 1:00 **LUNCH**

**Session III:** **GENETICS, SINGLE CELLS AND PATHWAYS**

Moderators: Cosmas Giallourakis, M.D., and Curtis Huttenhower, Ph.D.

1:05 – 1:25

***Exomes and Human Disease***

Mark Daly, Ph.D., Massachusetts General Hospital, Boston, MA

1:30 – 1:50

***Regulation of Innate Immunity by Long Non-Coding RNA***

Katherine Fitzgerald, Ph.D., University of Massachusetts Medical School, Worcester MA

1:55 – 2:15

***Reconstructing Regulatory Circuits: Harnessing Variation in Immune Cells***

Aviv Regev, Ph.D., Broad Institute, Cambridge, MA

2:20 – 2:40

***Revisiting T Regulatory Type 1 Cells***

Maria Grazia Roncarolo, M.D., San Raffaele-Telethon Institute for Cell and Gene Therapy, TIGET, Milano, Italy

2:45 – 3:00

**Q & A**

3:05 – 3:20

**BREAK**

**Session IV:** **DIET, METABOLITES AND DISEASE**

Moderators: Kate Jeffrey, Ph.D., and Alykhan Shamji, Ph.D.

3:25 – 3:45

***Tolerance to Oxygen and Asaccharolytic Metabolism Distinguish the Human Mucosally-Associated Gut Microbiota from Stool***

Gary Wu, M.D., University of Pennsylvania School of Medicine, Philadelphia, PA

3:55 – 4:15

***SLE – Genes to Drugs***

Timothy Behrens, M.D., Genentech, Inc., San Francisco, CA

4:20 – 4:40

***Molecular Control of Steady-State Dendritic Cell Maturation and Immune Homeostasis***

Averil Ma, M.D., University of California, San Francisco, CA

4:45 – 5:05

***Targeting Immunometabolism: An Interface between Immune, Metabolic and Oncologic Diseases***

Dhavalkumar Patel, M.D., Ph.D., Novartis Institutes for BioMedical Research, Basel, Switzerland

5:10 – 5:30

***Diet Dominates Host Genotype in Shaping the Gut Microbiota***

Peter Turnbaugh, Ph.D., FAS Center for Systems Biology, Cambridge, MA

**November 16, 2013**

7:15 - 7:40

Registration and Continental Breakfast

**Session V:** **SINGLE CELLS, RNA, EPIGENETICS AND DISEASE**

Moderators: Ramnik Xavier, M.D., and Balfour Sartor, M.D.

7:45 – 8:05

***Single-Cell Genomics for Pathway Discovery in Microbial Dark Matter***

Paul Blainey, Ph.D., Broad Institute, Cambridge, MA

8:10 – 8:30 ***Control of Antiviral Responses by Histone Mimics***  
Alexander Tarakhovskiy, M.D., Ph.D., The Rockefeller University, New York, NY

8:35 – 8:55 ***Autophagy, Cell Death and Disease***  
Beth Levine, M.D., UT Southwestern Medical Center, Dallas, TX

**KEYNOTE ADDRESS**

9:00 – 9:40 ***Ribosomes, Noncoding RNAs and Biology***  
Eric Lander, Ph.D., Broad Institute, Cambridge, MA

9:45 – 10:05 **Q & A**

10:10 – 10:25 **BREAK**

**Session VI: VIRUSES, CIRCUITS AND COMMUNICATION**

Moderators: Jonathan Braun, M.D., Ph.D., and Charles Elson, M.D.

10:30 – 10:50 ***Interactions Between the Virome and the Host***  
Herbert W. Virgin, M.D., Ph.D., Washington University School of Medicine, St. Louis, MO

10:55 – 11:15 ***Microbes, PSA and Signaling Networks***  
Sarkis Mazmanian, Ph.D., California Institute of Technology, Pasadena, CA

11:20 – 11:40 ***PI3K Pathway in Mucosal Lymphocytes***  
Holm Uhlig, M.D., Ph.D., University of Oxford, Oxford, United Kingdom

11:45 – 12:05 ***Clonal Expansions of CD4+ Killer T Cells and Plasmablasts Mediate IgG4-Related Disease***  
Shiv Pillai, M.D., Ph.D., Massachusetts General Hospital, Charlestown, MA

12:10 – 12:30 ***Genetic Variants Synthesize to Produce Paneth Cell Phenotypes that Define Subtypes of Crohn's Disease***  
Thaddeus S. Stappenbeck, M.D., Ph.D., Washington University School of Medicine, St. Louis, MO

12:35 **LUNCH**