

# Wednesday, October 26th

Information Desk Available 8:30 am – 4:00 pm in the Grand Promenade

## Special Interest Group Satellites

### **The Single Cell of Novel Immuno-Biology (Kohala 1/2, 9am-12pm)**

**Chairs:** Aki Minoda, RIKEN & RiMLS Radboud University; Amit Singhal, A\*STAR Infectious Diseases Labs; Musa M. Mhlanga, RiMLS-Radboud University Medical Center

- Single-cell biology of barrier tissues and COVID-19, Jose Ordovas-Montanes, Boston Children's Hospital, Harvard Medical School
- Activation of type 2 innate immune response with ageing, Aki Minoda, RIKEN IMS & RiMLS Radboud University
- Dynamics of host-pathogen interaction by single cell RNAseq, Amit Singhal, A\*STAR Infectious Diseases Labs
- Sex-differences in macrophage aging: are we missing half of the picture?, Berenice Benayoun, USC Keck School of Medicine
- Air Defense Systems: How HSC-mediated trained immunity provides protection against airborne diseases, Maziar Divangahi - Meakins-Christie Laboratories, McGill University Health Centre

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### **Rejuvenation of Innate Leukocytes in the Treatment of Disease (Kohala 3/4, 9am-12pm)**

**Chair:** Liwu Li, Virginia Tech

- Rejuvenation of Innate Leukocytes in the Treatment of Acute and Chronic Diseases, Liwu Li, Virginia Tech
- Genome-wide CRISPR Screen to Identify Regulators of Macrophage Efferocytosis: Novel Genes and Molecular Mechanisms, Hanrui Zhang, Columbia University School of Medicine
- Stress Responses, Macrophage Functions and Atherosclerosis, Ebru Erbay, Altos Labs
- Neutrophil-based Therapies for Inflammatory Diseases, Zhenjia Wang, Washington State University College of Pharmacy
- Engineered Leukocytes in the Treatment of Diseases, Edward A. Botchwey, Emory University

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### **Inflammatory Cell Death (Kohala 1/2, 1-4pm)**

**Chairs:** Ben Croker, UCSD and Motti Gerlic, Tel Aviv University

- Getting to Grips with Caspase-8 Homodimers and Heterodimers, Kim Newton, Genentech
  - What the FLIP? Caspase-8 is a Sheep in Wolf's Clothing, Douglas Green, St Jude Children's Research Hospital
  - Interferon Priming of Cell Death Signalling in Innate Immunity, James Vince, Walter and Eliza Hall Institute of Medical Research
  - Single Cell Transcriptomic Analysis of HIV-1 Infected Tonsils Reveals Critical Roles for Inflammatory Signaling in Infected and Bystander Cells, Talia H. Swartz, Icahn School of Medicine at Mount Sinai
  - Inflammatory Cell Death of Mucosal Dendritic Cells in the Small Intestine, Monica Yabal, School of Medicine Klinikum rechts der Isar
  - Inflammasome Activation by a Bacterial Type VI Secretion System, Motti Gerlic, Tel Aviv University
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### **Alcohol and Immunology: Mechanisms of Multi-Organ Damage (Kohala 3/4, 1-4pm)**

**Chairs:** Rebecca McCullough and Elizabeth J. Kovacs, University of Colorado Denver

- Neuroimmunometabolic Mechanisms of Alcohol Associated Risk for Comorbidities, Patricia Molina, Louisiana State University Health Sciences Center
- Impact of Chronic Ethanol Consumptions on the Epigenetic, Transcriptional, and Functional Landscape of Monocytes, Ilhem Messaoudi, University of Kentucky
- Alcohol-induced Alterations in Alveolar Macrophage Oxidative Stress and Metabolism Cause Phagocytic Dysfunction, Samantha Yeligar, Emory University / Atlanta VA Health Care System
- Ethanol Effects on Intestinal T-cell Responses in Mice, Gail Cresci, Cleveland Clinic Lerner Research Institute
- Immune Dysregulation in FASD: From Animal Models to the Clinic, Joanne Weinberg, University of British Columbia
- Network Meta Analysis on Mechanisms Underlying Alcohol Augmentation of Pancreatitis and Diabetes, Ryan J. Kim, Seton Hall
- Lymph from Alcohol-fed Animals Alters Perilymphatic Adipose Tissue Immune Milieu, Kourtney D. Weaver, Louisiana State University Health Sciences Center New Orleans
- IL-27 in Intestinal Motility and Barrier Following Ethanol and Burn, Marisa E. Luck, Loyola University Chicago
- Ethanol Intoxication and Post Burn Neuroinflammation Involves the Gut - Brain Axis, Rachel H. McMahan, PhD, University of Colorado Denver

This session was supported by NIAAA R 13 meetings grant NIH R13 AA020768. Principal Investigators EJ Kovacs and MA Choudhry.

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# Thursday, October 27<sup>th</sup>


**Information Desk**  
7:30 am – 12:30 pm  
&  
3:00 pm - 6:30 pm  
Grand Promenade

**Speaker Ready Area**  
8:00 am – 12:30 pm  
&  
3:00 pm - 6:00 pm  
Grand Promenade

## 8:00 – 9:30 am Poster Flash Talks


Programmed by MTTC

### Autoimmunity / Immune-Mediated Diseases

**Targeting IL-4 and IL-13 to Treat Crohn's Disease-Associated Intestinal Fibrosis**, Kwestan Safari, *BC Children's Hospital Research Institute* (Presidential Merit Finalist) – 012 


**Chemokine Receptor CX3CR1 Controls Macrophage-nerve Interactions in the Pancreatic Islet**, Vijay Sai Josyula, *Uppsala University* (Presidential Merit Finalist) - 013


### Infection and Sepsis

**Tissue Disruption During Device Implantation Masks Contaminating *S. Aureus* Aggregates**, Timothy Borgogna, *Montana State University* (Presidential Merit Finalist) – 048 

**Protective Effects of Resolving Neutrophils in Sepsis**, RuiCi Lin, *Virginia Tech* (Presidential Merit Finalist) - 068

### Innate Immunity

***Lactobacillus Johnsonii* supplementation Reduces Allergic Responses in Adults and Offspring**, Lillian Arzola Martinez, *University of Michigan* (Presidential Merit Finalist) – 066 

**Mechanisms for the Generation of Exhausted Monocyte Memory**, Yajun Wu, *Virginia Tech* (Presidential Merit Finalist) – 069 

### Leukocyte Biology at Tissue Sites

**Hyaluronic Acid Characterization in Alveolar Macrophages During Chronic Alcohol Use**, Kathryn Crotty, *Emory University* (Presidential Merit Finalist) - 095


**Intoxication at Time of TBI Exacerbates Colonic And Neuro-Inflammation**, Abigail Cannon, *Loyola University Chicago* - 096

### Chairs:

Katherine Martin & Archana Gopalakrishnan

### Location:

Grand Ballroom

**Genetically Engineered Probiotics to Reduce Intestinal Inflammation in Crohn's Disease**, Chanel Ghesquiere, *BC Children's Hospital Research Institute/UBC* – 014 

**Glycoengineering Enhances the Antibody-dependent Cytotoxicity of HIV Broadly Neutralizing Antibodies**, Angela Corrigan, *University of Pennsylvania, Wistar Institute* (Presidential Merit Finalist) - 049

**Synergistic Effects Induced by IL-4 and TNF-alpha in Monocytes**, Ruoxi Yuan, *Hospital for Special Surgery* (Presidential Merit Finalist) - 070

**miR-146a Mimic Administration Attenuates Intestinal Inflammation After Alcohol and Burn**, Caroline Herrnreiter, *Loyola University Chicago* - 097

**9:30 – 10:00 am Break**

**10:00 am Joost Oppenheim Memorial**

Join for this brief recognition of the life and contributions of JLB's past Editor-in-Chief, Joost Oppenheim.

Presented by Luis Montaner, JLB EIC

Grand Ballroom

**10:00 – 11:30 am Plenary I: Covid-19**

**Chairs:**

Domenico Mavilio & Chen Dong

**Location:**

Grand Ballroom

10:00 am

**Regulation of Adaptive Immunity to COVID and Beyond**, Chen Dong, *Tsinghua University*

10:30 am

**COVID 19: The Different Immune Response of Children and Adults**, Carsetti Rita, *OBPG*

11:00 am

**Adaptive Immunity and Immune Memory to SARS-CoV-2 after COVID-19**, Shane Crotty, *La Jolla Institute for Immunology*

**11:30 – 12:30 pm Poster Session I**

Grand Promenade and Lagoon Lanai

**12:30 – 3:00 pm FREE TIME**

Enjoy lunch on your own and enjoy the nearby sights. Come back by 3:00pm for the Award Talks!

**3:00 – 4:15 pm Presidential Scholars**

**Chairs:**

Louis Justement, Nick Lukacs, & David Underhill

**Location:**

Grand Ballroom

**Graduate Student Finalists**

3:00 pm

**VISTA Regulates Tregs and  $\gamma\delta$  T Cells to Promote Sepsis-Survival**, Chyna Gray, *Brown University/ Rhode Island Hospital - 042*

3:15 pm

**Binge Ethanol Accelerates Neuroinflammation and Cognitive Dysfunction in Advanced Age**, Paige Anton, *University of Colorado Anschutz - 057*

3:30 pm


**Arp2/3 Inhibitory Protein Arpin Regulates Endothelial Permeability and Neutrophil Transmigration**, Armando Montoya-Garcia, *CINVESTAV - 058*

**Postdoctoral Finalists**

3:45 pm

**MyD88 Signaling Drives TLR-Mediated Trained Immunity via Macrophage Reprogramming**, Allison Owen, *Vanderbilt University Medical Center - 059*

4:00 pm

**Memory-like NK Cells have Distinct Effector and Persistence Signatures**, Jennifer Foltz, *Washington University School of Medicine – 104* 

**4:15 – 4:45 pm Break,** Grand Promenade and Lanai Lagoon

**4:45 – 6:30 pm Excellence in  
Leukocyte Biology**

**Chairs:**

Louis Justement, Nick Lukacs, &  
David Underhill

**Location:**

Grand Ballroom

**Early Career Finalists**

4:45 pm

**Dancing Regulatory T Cells  
Protect the Neurons During  
Autoimmune  
Encephalomyelitis,**  
Shivashankar Othy, *University of  
California, Irvine* - 007

5:05 pm

**An Emerging Paradigm of  
Cxcl12/Cxcr4 Involvement in  
Breast Cancer Metastasis,**  
George Karagiannis, *Albert  
Einstein College of Medicine* -  
029

5:25 pm

**Extracellular Adenosine  
Signaling Reverses the Age-  
Driven Decline in Neutrophil  
Function,** Elsa Bou Ghanem,  
*University at Buffalo* - 043

**Mid-Career Finalists**

5:45 pm

**IVIG Triggers Death of  
Neutrophils in Kawasaki Disease  
and MIS-C,** Ben Croker, *UC San  
Diego, School of Medicine* - 036

6:05 pm

**Engineering Chimeric Antigen  
Receptor Neutrophils for  
Targeted Cancer  
Immunotherapy,** Qing Deng,  
*Purdue University* - 061

**6:30 – 7:00 pm Break,** Grand Promenade and Lanai Lagoon

**7:00 – 8:00 pm SLB Legacy  
Keynote Lecture: Harnessing the  
Potential of Hematopoietic Stem  
Cells for Targeted Delivery of  
Therapeutic Genes**

**Chair:**

Louis Justement, Nick Lukacs, &  
David Underhill

**Location:**

Grand Ballroom

*SLB Legacy Awardee*

Robert Clark, University of Texas Health Science Center

**8:00 – 9:30 pm Opening Reception,** Grand Promenade and Lanai Lagoon

Enjoy an opening reception with lite fare to celebrate the start of the conference

# Friday, October 28th

**Information Desk**  
7:30 am – 12:30 pm  
&  
3:00 pm – 6:00 pm  
Grand Promenade

**Speaker Ready Area**  
8:00 am – 12:30 pm  
&  
3:00 pm – 6:00 pm  
Grand Promenade

## 8:00 – 9:00 am Poster Session II

Grand Promenade and Lagoon Lanai

### 9:00 am – 10:30 am Concurrent Sessions 1 & 2

#### Concurrent Session 1: Omics in Leukocyte Biology

**Chairs:** Musa Mhlanga & Jennifer Foltz

**Location:** Grand Ballroom

**Featured Speaker:**

9:00 am **The Epigenetics Mechanisms of Trained Innate Immunity**, Musa Mhlanga, *Radboud University*

**Selected Talks:**

9:30 am **Utilization of Multiomics to Identify Breakdowns in Pulmonary Vaccine Efficacy**, Lydia Roberts, *Rocky Mountain Laboratories, NIAID, NIH* - 105

9:45 am **Memory-like NK Cells are Epigenetically Distinct from Conventional NK Cells**, Jennifer Tran, *Washington University School of Medicine* (Presidential Merit Finalist) – 106

10:00 am **Phenotyping Sepsis Patient Neutrophils using Organ-on-chip, Proteomics, and In-Silico Modeling**, Laurie Kilpatrick, *Temple University* - 107

#### Concurrent Session 2: COVID

**Chairs:** Mohamed Abdel-Mohsen & Ben Croker

**Location:** Kohala

**Featured Speaker:**

9:00 am **Viral-Host Interactions: From Omics to Function**, Mohamed Abdel-Mohsen, *The Wistar Institute*

**Selected Talks:**

9:30 am **DNA Vaccine Ability to Protect Against Multiple Strains of SARS-CoV-2**, Kar Muthumani, *GeneOne Life Science Inc* – 037

9:45 am **Fungal Translocation Is Elevated During Long-COVID and Induces NF-κB Signaling**, Leila Bertoni Giron, *The Wistar Institute* - 038

10:00 am **Siglec-9 Restrains Antibody-dependent Natural Killer Cell Cytotoxicity Against SARS-CoV-2**, Pratima Saini, *The Wistar Institute* (Presidential Merit Finalist) - 039

10:15 am **Elucidating the Role of IRF3 in the Pathogenesis of COVID-19**, Wendy Walker, *Texas Tech University Health Sciences Center* - 040

OR

**10:30 am – 11:00 am Break with JLB**, Grand Promenade and Lanai Lagoon

Meet the *Journal of Leukocyte Biology* Editor-in-Chief, Incoming Editor-in-Chief, and Senior Editorial Team during this coffee break. Discuss your manuscript ideas and learn about the submission process.

**11:00 – 12:30 pm Concurrent Sessions 3 & 4**

**Concurrent Session 3: Innate Immunity**


**Chairs:** Massimo Locati & Vidula Vachharajani

**Location:** Grand Ballroom

**Featured Speaker:**

11:00 am **Immunoregulatory Functions of Myeloid MS4A Proteins**, Massimo Locati, *University of Milan*

**Selected Talks:**

11:30 am **Role for Stimulator of Interferon Genes in Toll-Like Receptor8 Signaling**, Karla García-Martínez, *Cornell University* (DEI Travel Awardee) – 062 

11:45 am **Mesenchymal Stromal Cells Reprogram Hematopoietic Stem Cells for Trained Immunity**, James Lederer, *BWH and Harvard Medical School* - 063

12:00 pm **Humanized  $\beta$ 2-integrin Knockin Mice for Imaging of Leukocyte Integrin Activation**, Lai Wen, *La Jolla Institute for Immunology* - 064

12:15 pm **Targeting Apoptotic Cell Clearance by Macrophages using Small Molecules**, Caitlin Gillis, *Centre for Inflammation, Centenary Institute and University of Technology Sydney* - 065

**Concurrent Session 4: Cancer**

**Chairs:** Asma Gati & George Karagiannis

**Location:** Kohala

**Featured Speaker:**

11:00 am **Elevated Leptin Levels are Exclusively Effective in Triggering Breast Cancer Aggressiveness**, Asma Gati, *University Tunis El Manar*

**Selected Talks:**

11:30 am **Development of a Novel Immunotherapy (TheraVac\*) to Cure Solid Tumors**, MD Alam, *National Cancer Institutes, National Institutes of Health* - 030

11:45am **HDAC6 Inhibition Dampens the Invasive Capacity of Leukemia B Cells**, Karina Jimenez Camacho, *CINVESTAV* (DEI Travel Awardee) - 031

12:00 pm **Novel Therapeutic Targets for High-risk Pediatric Acute Myeloid Leukemia**, Nathaniel Buteyn, *Van Andel Institute* - 032

12:15 pm **Targeting Virus-driven Post Transplant Cancer using T Cell Therapy**, Rachel Cooper, *Scottish National Blood Transfusion Service* - 033

OR

**12:30 – 3:00 pm FREE TIME**

Enjoy lunch on your own and enjoy the nearby sights. Come back by 3:00pm for the next Plenary Session!

**3:00 – 4:30 pm Plenary II: Cancer****Chairs:**

Ann Richmond &amp; Lee-Ann Allen

**Location:**

Grand Ballroom

3:00 pm

**Cellular Interactions within the Tumor Microenvironment**, Meng Michelle Xu, *Institute for Immunology Tsinghua University*

3:30 pm

**Metabolism in Cancer Liver Metastasis and Therapy**, Weiping Zou, *University of Michigan School of Medicine*

4:00 pm

**Spontaneous Coordinated Cellular and Humoral Immune Responses Provide Superior Protection Against Human Malignant Progression**, Jose Conejo-Garcia, *Moffitt Cancer Center*

**4:30 – 5:45 pm Immune Podcast – LIVE RECORDING** Grand Ballroom

Watch a live recording of the popular Immune Podcast, starring Vincent Racaniello, Cindy Leifer, Stephanie Langel, and Brianne Barker. This is a rare opportunity to witness the intersection of the science you do every day in the lab and how to communicate it effectively to the world. The topic is “*The Body’s Defenders Against Disease*”

**5:45 – 6:15 pm Break**, Grand Promenade and Lanai Lagoon**6:15 pm – 7:45 pm Plenary III:****Chairs:**

Clive Gray &amp; Gail Bishop

**Location:**

Grand Ballroom

**Autoimmunity / Immune-Mediated Diseases**

6:15 pm

**Advances in Pathophysiology and Treatment of RAG Defects**, Anna Villa, *National Research Council, San Raffaele-Telethon Institute for Gene Therapy and IRGB, CNR*

6:45 pm

**Actin-binding Proteins and Inflammatory Diseases**, Michael Schnoor, *Cinvestav-IPN*

7:15 pm

**IMPACTing Autoimmunity by Sculpting Humoral Immunity and Controlling the Adaptive Immune Response**, Daniela Cipolletta, *Seismic Therapeutic*



# Saturday, October 29th

**Information Desk**  
7:30 am – 12:30 pm  
&  
3:30 pm - 5:00 pm  
Grand Promenade

**Speaker Ready Area**  
8:00 am – 12:30 pm  
&  
3:30 pm – 5:00 pm  
Grand Promenade

## 8:00 – 9:00 am Poster Session III

Grand Promenade and Lagoon Lanai

### 9:00 – 10:30 am Concurrent Sessions 5 & 6

#### Concurrent Session 5: Adaptive Immunity

**Chairs:** Clive Gray & Carlos Rosales

**Location:** Grand Ballroom

**Featured Speaker:**

9:00 am **Disrupted Memory T Cell Expansion in HIV-exposed Uninfected Infants is Preceded by Premature Skewing of T Cell Receptor Clonality**, Clive Gray, *Stellenbosch University/University of Cape Town*

**Selected Talks:**

9:30 am **Hepatic IFN $\gamma$ + Memory CD8 T Cells Suppress Neutrophils in Sepsis**, Matthew Taylor, *The Feinstein Institutes for Medical Research* - 001

9:45 am **IL-2/CD3/CD28 Stimulation Promotes Regulatory T Cell Expansion in Premature Infants**, Timothy Boly, *University of Iowa Hospitals and Clinics* - 002

10:00 am **Early Thymic Progenitor Signals Upregulate FOXP1 in Thymic Epithelial Cells**, Lucas Armitage, *University of Colorado* - 003

10:15 am **CD40 Maintains B1b-Cell Homeostasis in Atherosclerosis**, Myrthe Reiche, *Uppsala University* (Presidential Merit Finalist) – 004 

#### Concurrent Session 6: Autoimmunity/Immune-Mediated Diseases

**Chairs:** Ivona Aksentijevich & Kwestan Safari

**Location:** Kohala

**Featured Speaker:**

9:00 am **Monogenic Systemic Inflammatory Diseases: From Autoinflammation to Autoimmunity**, Ivona Aksentijevich & Kwestan Safari

**Selected Talks:**

9:30 am **The role of Chromogranin A and Catestatin in Disease**, Elke Muntjewerff, *Uppsala University* (Presidential Merit Finalist) - 008

9:45 am **CD98 Defines a Metabolically Flexible, Proinflammatory Subset of Low-Density Neutrophils**, Katherine Martin, *WEHI* - 009

10:00 am **CD4T Cell-derived Acetylcholine Drives Regulatory T-cell Differentiation in Gut Inflammation**, Girdhari Lal, *National Centre for Cell Science* - 010

10:15 am **Extracellular Vesicles Promote Neuroimmune Pathology in Alcohol Use Disorder**, Leon Coleman, *UNC* - 011

OR

**10:30 – 11:00 am Break**, Grand Promenade and Lagoon Lanai

**11:00 am – 12:30 pm Concurrent Sessions 7 & 8**

**Concurrent Session 7: Leukocyte Biology at Tissue Sites**

**Chairs:** Xiaoyu Hu & Girdhari Lal

**Location:** Grand Ballroom

**Featured Speaker:**

11:00 am **Metabolic Regulation of Alveolar Macrophage Function during Pulmonary Inflammation**, Xiaoyu Hu, *Tsinghua University*

**Selected Talks:**

11:30 am **Niche-Specific Pro-Angiogenic Neutrophil Specialization Promotes Tumor Vascularization and Growth**, Ronen Sumagin, *Northwestern University* - 091

11:45 am **Macrophage Heterogeneity During Skin Wound Healing in Mice**, Jingbo Pang, *University of Illinois at Chicago* (Presidential Merit Finalist) – 092



12:00 pm **TIGIT-Dependent Tregs Provide Resistance to Uveitis Through Suppressing Th17 Cells**, Darren Lee, *University of Oklahoma Health Sciences Center and Dean McGee Eye Institute* – 093

12:15 pm **Age-Dependent Differences in Germinal Center T-Cell Responses to Influenza**, Suhas Sureshchandra, *University of California Irvine* (Presidential Merit Finalist) – 094

**Concurrent Session 8: Infectious Diseases**

**Chairs:** Faith Osier & Elsa Bou Ghanem

**Location:** Kohala

**Featured Speaker:**

11:00 am **Mechanisms Against Malaria**, Faith Osier, *International AIDS Vaccine Initiative*

**Selected Talks:**

11:30 am **Modulating Tregs Controls the Infection Response Following Traumatic Injury**, Daniel Younger, *Brigham and Women's Hospital* - 044

11:45 am **Intracellular Brucella Mutant Sensing by Lung Myeloid Cells Mediates Protection**, David Pascual, *University of Florida* - 045

12:00 pm **Dual Immunomodulatory and Antibacterial Activities of Novel Glutamine Metabolism Antagonist**, Sadiya Parveen, *Johns Hopkins University* – 046

12:15 pm **RNAseq Reveals *S. Aureus* Utilizes SaeR/S on Human Neutrophil Function**, Madison Collins, *Montana State University* - 047

OR

**12:30 – 4:00 pm Free time**

Enjoy lunch on your own and enjoy the nearby sights. Come back by 4:00pm for the next Plenary Session!

**4:00 – 4:30 pm Member Business Meeting & Award Presentations**

Grand Ballroom

Learn about the current status of SLB and JLB and congratulate award winners with the announcement of Presidential and Excellence in Leukocyte Biology awards.

**4:30 – 4:45 pm Career Perspectives with Charles “Cash” McCall**

Grand Ballroom

*Chaired by Robert Clark and Nick Lukacs*

Cash McCall, 2021 Legacy Awardee shares valuable insight into a lifelong career in science well lived.

**4:45 – 6:15 pm Plenary IV: Advances  
in Leukocyte Biology**

**Chairs:**

Nick Lukacs & Domenico  
Mavilio

**Location:**

Grand Ballroom

4:45 pm

**Constitutive ILC2 Activation Causes Spontaneous Pulmonary Fibrosis**, Kazuyo Moro, *Osaka University*

5:15 pm

**TREM2 in Neurodegeneration and Cancer**, Marco Colonna, *Washington University School of Medicine*

5:45 pm

**Innate Lymphoid Cells (ILCs) in Cancer: Why They Matter**, Camilla Jandus, *University of Geneva*