

Day 1 Saturday October 27th

- 5-5:05** **Welcome and Opening Remarks: Chris Hunter (for the organizers)**
- 5:05-7:25 Opening Lectures & Awards Presentations:
- 5:05-6:45 Awards Ceremony – Presentations and Milstein Award Lectures: (Chair, Nancy Reich)
- 5:10-15 Milstein Awardee(s) Introduction
- 5:15-5:50 **Milstein Awardee(s) Lecture I**
Luke O’Neill (Trinity College Dublin, Ireland)
Krebs Cycle drives signals for inflammation
- 5:50-6:25 **Milstein Awardee(s) Lecture II**
Thirumala Kanneganti (St. Judes, Memphis)
Regulation of inflammasome activation and cell death
- 6:25-6:45 **Awardee Ceremony**
ICIS BioLegend William E. Paul Awardee; Giorgio Trinchieri (NCI, NIH)
ICIS Honorary member Awardee; Robert Fleischmann
ICIS Distinguished Service Awardee; Tadimitsu Kishimoto (Osaka, Japan)
Milstein Young Investigator Awardee(s)
 Cristina Bergamaschi, NIH,DC
 Ricardo Rajsbaum, UTMB, TX
 Vijay Rathinam, UConn, CT
 Gregory Sonnenberg, Weill Cornell, NY
 Munir Akkaya, NIH
Christina Fleischmann Awardee Sophia Davidson, WEHI Australia
Sidney & Joan Pestka Graduate Awardee Erika Engelowski, Dusseldorf, Germany
Sidney & Joan Pestka Post Graduate Award; Christoph Schneider, UCSF, CA
- 6:45-7:25 **Keynote Speaker 1: Arlene Sharpe** PhD (Harvard Medical School, USA)
The Diverse Functions of the PD-1 Pathway
- 7:30-8:30** **Welcome Mixer**
- 8:30 – 10:30** **POSTER SESSION I**

Day 2 Sunday October 28th

8.30-10:30 **Plenary I: Immunoregulation I**

- 8:30-8:55 **Anne O'Garra** (Francis Crick Institute, UK)
Transcriptional regulation of IL-10 versus proinflammatory cytokines and consequences for the immune response
- 8:55-9:20 **Maria Grazia Roncarolo** (Stanford, USA)
The Development and Function of IL-10 Producing Type 1 Regulatory T Cells
- 9:20-9:45 **Alexander Rudensky** (Memorial Sloan Kettering, USA)
Cytokine cues in regulatory T cell differentiation and function
- 9:45-10:00 **Cristina Bergamaschi** (NIH, MD)
Milstein Young Investigator Awardee – short talk
O01 - Treatment with heterodimeric IL-15 shapes the cytokine and chemokine milieu of the tumor, promoting tumor infiltration by cytotoxic lymphocytes: a general method for lymphocyte entry in tumors
- 10:00-10:15 **Ricardo Rajsbaum** (UTMB, TX)
Milstein Young Investigator Awardee – short talk
O02 - Regulation of novel pattern recognition receptor signaling and IFN induction by unanchored K48-linked polyubiquitin chains
- 10:15-10:30 **Sophia Davidson** (WEHI, Australia)
Christina Fleischmann Awardee – short talk
O03 - Delineation of the inflammatory pathway behind proteasome-associated autoinflammatory syndrome

10:30-11:00 **COFFEE BREAK**

11:00-12:35 **Symposium 1 (Parallel): Innate Sensing and Signaling**

- 11:00-11:25 **Kate Fitzgerald** (UMass Medical School, USA)
Cytokine Gene Regulation
- 11:25-11:50 **Ken Rock**, (UMass Medical School, USA)
A novel receptor involved in the recognition of DAMPs and Cell Death
- 11:50-12:15 **James Chen** (UTSW)
DNA sensing by cGAS
- 12:15-12:25 **Erika Engelowski** (Dusseldorf, Germany)
Sidney & Joan Pestka Graduate Awardee
O04 - Di- and trimeric biological switches made of nanobody-cytokine receptor fusion proteins simulate natural signal transduction
- 12:25-12:35 **Christoph Schneider** (UCSF, CA)
Sidney & Joan Pestka Post Graduate Award
O05 - A metabolite-triggered tuft cell-ilc2 circuit drives small intestinal remodeling

11:00-12:35 **Symposium 2 (Parallel): Antiviral responses**

- 11:00-11:25 **Elina Zuniga** (UCSD, USA)
Type I Interferon Exhaustion
- 11:25-11:50 **Carolina Lopez** (UPenn, USA)
Defective (Interfering) Viral Genomes Re-Explored: Impact on Antiviral Immunity and Virus Persistence
- 11:50-12:15 **Steve Varga** (U. Iowa, USA)
The Good, the Bad, and the Ugly Consequences of CD8 T cell Memory to RSV
- 12:15-12:25 **Short Talk; Arunakumar Gangaplara**
O06 - Type I interferon signaling attenuates regulatory T cell function in viral infection and in the tumor microenvironment

- 12:25-12:35 **Short Talk; Genevieve Pepin**
007 - Gap-junction dependent trans-activation of human monocytes by CGAMP
- 12:45-1:45 INDUSTRY SPONSORED SYMPOSIUM with LUNCH**
- Jochan Salfeld** (Abbvie, USA):
The anti-TNF success story and the new challenges ahead
- Jamie Orengo** (Regeneron, USA):
Dupilumab confirms the role of IL-4 and IL-13 as central drivers of type 2 immunity in human disease
- 2:00-4.00 Symposium 3: Inflammasomes, Interferons and beyond**
- 2:00-2:25 **President's Lecture; Nancy Reich** (Stony Brook University, NY, USA)
Pathogenic Effects of IFIT2 and IFN- β During Fatal Systemic C.albicans Infection
- 2:25-2:50 **Igor Brodsky** (UPenn, USA)
Control of inflammatory gene expression by caspase-8
- 2:50-3:15 **Clare Bryant** (Cambridge, UK)
Following the speck: pattern recognition receptors in bacterial infections.
- 3:15-3:40 **Feng Shao** (Beijing, China)
Pyroptosis: from innate immunity to cancer
- 3:40-3:50 **Short Talk; Apurva Kanneganti**
008 - GSDMD is critical for autoinflammatory pathology in a mouse model of familial Mediterranean fever
- 3:50-4:00 **Short Talk; Virginie Deswaerte**
009 - The AIM2 innate immune DNA sensor facilitates STAT3-driven gastric tumorigenesis
- 2:00-4.00 Symposium 4 (Parallel): Infection and Inflammation in the Lung**
- 2:00-2:25 **Clare Lloyd** (Imperial College London, UK)
Immune regulation in the allergic lung
- 2:25-2:50 **John Silver** (Medimmune, MD, USA)
IL-33 and ILCs
- 2:50-3:15 **Andrew McKenzie** (MRC, UK)
IL-33 and ILC2 in the regulation of adaptive immunity and metabolism
- 3:15-3:40 **Andreas Wack** (Crick Institute, UK)
Multifaceted roles of type I interferons in respiratory infections
- 3:40-3:50 **Short Talk; Ran Wang**
010 - Modulation of interleukin-22 alleviate respiratory viral infection by promoting epithelial intrinsic type I interferon response
- 3:50-4:00 **Short Talk; Mohamed I Saad**
011 - ADAM17/IL-6 trans-signalling axis: a promising therapeutic target for lung adenocarcinoma
- 4:00-4:30 COFFEE BREAK**
- 4:30-6.30 Symposium 5: Cytokines in Neuronal Inflammation**
- 4:30-4:55 **Burkhard Becher (U of Zurich, Switzerland)**
GM-CSF In Tissue Inflammation: Central Communication Conduit Between T Cells and Phagocytes In Immunopathology
- 4:55-5:20 **Douglas Golenbock** (Umass Medical School, USA)
The role of Interleukin-18 in Alzheimer's-related seizure disorder.
- 5:20-5:45 **Glen Rall** (Fox Chase Cancer Center, USA)
Atypical signaling pathways induced by interferon gamma following viral infection of neurons
- 5:45-6:10 **Marco Colonna**, (Washington University, USA)
TREM2 and regulation of neuronal inflammation.
- 6.10-6.20 **Short Talk; Ignacio Moraga Gonzalez**

- 6:20-6:30 O12 - Decoupling IL-6 biological effects using protein engineering
Short Talk; Daniel Gough
O13 - Demystifying the mechanism of mitochondrial STAT3 activity.
- 4:30-6:30 Symposium 6 (Parallel): Intestinal Homeostasis**
- 4:30-4:55 **Greg Sonnenberg** (Weil Cornell, USA)
Milstein Young Investigator Awardee
Cytokine regulation of intestinal health
- 4:55-5:20 **Ivan Zanoni** (HMS, USA)
Type III interferons control intestinal inflammation
- 5:20-5:45 **Manuela Rafatellu** (UCSD, USA)
Evasion of IL-22-mediated antimicrobial responses by bacterial pathogens
- 5:45-6:10 **Nicola Gagliani** (Hamburg, Germany)
Functional heterogeneity of IL-22 and IL-10 producing CD4 T cells
- 6:10-6:20 **Short Talk; Constance McElrath**
O14 - Critical role of IFNS in gastro-intestinal injury repair
- 6:20-6:30 **Short Talk; Chien-Hsiung Yu**
O15 - NLRP1 inflammasome exacerbates inflammatory bowel disease through IL-18 production and dysbiosis of butyrate producing commensal clostridiales
- 7:00-9:00 Awardee and Young Investigator Mixer (invitation only)**
- 9:00-11:00 POSTER SESSION II**

Day 3

Monday October 29th

8.30-10:35 **Plenary 2: Advances in Pathogenic Th17 axis of evil**

8:30-9:05 **KEYNOTE SPEAKER 2; Saah Gaffen** (UPMC)

Oh To Be Seventeen Again: IL-17 signaling in fungal immunity and autoimmune disease

9:05-9:30 **John O'Shea** (NIAMS, USA)

Cytokine instruction of gene expression: a genomic view

9:30-9:55 **Diane Mathis** (HMS, USA)

Crosstalk between tissue-Tregs and mesenchymal stromal cells.

9:55-10:20 **Gitta Stockinger** (Francis Crick Institute, UK)

Environmental influences on intestinal homeostasis

10:20-10:35 **Short Talk; Munir Akkaya** (NIH, MD)

Milstein Young Investigator Awardee

O16 - Type I interferons regulate B cell development and differentiation

10:35-11:00 COFFEE BREAK

11:00-12.35 **Symposium 7: Type II Immunity**

11:00-11:25 **Judith Allen** (U. Manchester, UK)

Cytokine control of macrophage dynamics during helminth infection

11:25-11:50 **De'broski Herbert** (UPenn, USA)

Type 2 cytokine release from cDC2 critically regulates host protection and immunopathology

11:50-12:15 **Elia Tait Wojno** (Cornell, USA)

Comparative Immunology to dissect immune responses during heminth infection and allergy

12:15-12:25 **Short Talk; Jose Ordovas-Montanes**

O17 - Allergic inflammatory memory of type 2 cytokines in human respiratory epithelial progenitor cells

12:25-12:35 **Short Talk; Steven Van Dyken**

O18 - Tissue signals imprint ILC2 transcriptional identity and preemptive function

11:00-12.35 **Symposium 8 (Parallel): Innate Cytokines and Cancer**

11:00-11:25 **Tadatsugu Tanguchi** (U. Tokyo, Japan)

HMGB1 and other DAMPs in cancer and other diseases; therapeutic implication

11:25-11:50 **Andy Minn** (UPenn, USA)

Dichotomous Functions of Pattern Recognition Receptor and Interferon Signaling in Cancer

11:50-12:15 **Brendan Jenkins** (Hudson Institute, Australia)

Uncovering the pro-tumourigenic role of innate immune DNA sensors in cancer

12:15-12:25 **Short Talk; Aleks Camille Guanizo**

O19 - STAT3 suppresses primary tumour growth, but increases metastasis in MYC-driven small cell lung cancer

12:25-12:35 **Short Talk; Christopher S Garris**

O20 - Successful anti-PD-1 cancer immunotherapy requires T cell-dendritic cell crosstalk involving IFN- γ and IL-12

12:45-1:45 BIOTECH/VC PANEL (Atlas Ventures)

2:00-4.00 **Symposium 9: Immunoregulation II**

2:00-2:25 **Christina Stallings** (Washington University, USA)

Regulating Cytokine Production and Inflammation to Control Tuberculosis

2:25-2:50 **Mandy McGeechy**, (U. Pittsburg Medical School, USA)

Energizing the troops: Th17 cell functions beyond classical inflammation

2:50-3:15 **Carla Rothlin** (Yale, USA)

- 3:15-3:40 **Death begets a new beginning**
Henrique Veiga-Fernandez (Lisbon, Portugal)
 Neuronal regulation of innate lymphoid cells
- 3:40-3:50 **Short Talk; Ka Yee Fung**
 O21 - Interleukin-11 signaling induces a unique pathogenic CD4+ T helper-17 cell population
- 3:50-4:00 **Short Talk; Javier Uceda**
 O22 - The stromal tissue compartment as an orchestrator of IL-6-driven anti-microbial host defence
- 2:00-4.00 Symposium 10 (Parallel): Type III and other IFNs**
- 2:00-2:25 **Ram Savan** (U. Washington, USA)
 Molecular pathways that bifurcate type I and III interferon responses
- 2:25-2:50 **Paul Hertzog** (Hudson Institute, Australia)
 Regulation of Mucosal immunity to infection and cancer by Interferon epsilon.
- 2:50-3:15 **Caroline Coyne** (U. Pittsburg Medical School, USA)
 Antiviral signaling at the maternal-fetal interface
- 3:15-3:40 **Bryan Williams** (Hudson Institute, Victoria, AU)
 Combining TLR agonists for cancer therapy
- 3:40-3:50 **Short Talk; Emily A Hemann**
 O23 - IFN-lambda facilitates protective T cell immunity by modulation of migratory dendritic cell function during influenza virus infection
- 3:50-4:00 **Short Talk; Christina Cho**
 O24 - Inactivation of type I interferon responses in the tumor microenvironment triggers the stromagenic switch and desmoplasia
- 4:00-4:30 COFFEE BREAK**
- 4:30-6.10 Symposium 11: Cytokines and Cancer II**
- 4:30-4:55 **Xiaoxia Li** (Cleveland Clinic, USA)
 IL-17 signaling in autoimmunity and cancer
- 4:55-5:20 **Steve Ziegler** (Benaroya Research Institute, USA)
 Epithelial cytokines and cancer
- 5:20-5:45 **Marina Pajic** (Garvan Institute, Australia)
 Modulation of the Src/JAK/STAT3 axis within the complex tumour microenvironment: optimizing drug targeting in pancreatic cancer
- 5:45-6:10 **Reshma Singh (Novartis, USA)**
 Anti-IL-1b in cancer immunotherapy
- 4:30-6.10 Symposium 12 (Parallel): Type I IFNs in Disease**
- 4:30-4:55 **Daniel Stetson** (U. Washington, USA)
 Induction of the type I interferon response
- 4:55-5:20 **Yannick Crow** (U. Manchester, UK)
 Nucleic acid driven inflammation in humans
- 5:20-5:45 **Michael Carroll** (HMS, USA)
 The role of Interferon alpha in CNS lupus
- 5:45-6:10 **Kerry Casey** (Medimmune)
 Blockade of Type I IFNs in SLE

CONFERENCE DINNER – CRUISE 7:00-10:00PM

Day 4

Tuesday October 30th

8.30-10:30

Symposium 13: Philip I. Marcus Symposium

8:30-8:55

Michael Gale (U. Washington, USA)

Immune programming by RIG-I-like receptors and cytokine crosstalk

8:55-9:20

Michaela Gack (U. Chicago, USA)

Mechanisms of Innate Sensing and Signaling by RIG-I-like Receptors

9:20-9:45

Ganes Sen (Cleveland Clinic, USA)

EGFR is needed for eliciting innate immune signaling by intracellular nucleic acid recognizing receptors

9:45-10:10

John Schoggins (UTSW, USA)

Inhibition of viral replication by interferon stimulated genes

10:10-10:20

Short Talk; Senad Divanovic

O25 - Type I interferon sensing unlocks dormant adipocyte inflammatory potential

10:20-10:30

Short Talk; Shiuli Agarwal

O26 - The long non-coding RNA LUCAT1 transcriptionally regulates type-I interferon responses

8.30-10:30

Symposium 14 (Parallel): Dermal Responses, Cytokines

8:30-8:55

John Harris (UMass Medical School, USA)

Cytokines promote the localization and survival of autoreactive T cells in skin lesions of vitiligo patients

8:55-9:20

Brian Kim (Washington University, USA)

Neuroimmune Regulation of Skin Inflammation

9:20-9:45

Daniel Kastner (NIH, USA)

To Ubiquitinate or Deubiquitinate, That is the Question

9:45-10:10

Jennifer Towne (Janssen Pharmaceuticals, USA)

Regulation and function of interleukin-36

10:10-10:20

Short Talk; Tom Brodnicki

O27 - A long noncoding RNA attenuates dendritic cell cytokine production and decreases autoimmune disease susceptibility

10:20-10:30

Short Talk; Keitaro Fukuda

O28 - AIM2-deficient dendritic cell vaccine facilitates adoptive T-cell therapy and anti-PD-1 immunotherapy via the activation of sting-type I IFN signaling

10:30-11:00

COFFEE BREAK

11:00-12:45

Symposium 15 (Parallel): Inflammasome and IL1 Family members II

11:00-11:25

Vijay Rathinam (UConn, USA)

Milstein Young Investigator Awardee

O29 - The Expanding Functions of Inflammasomes complexes

11:25-11:50

Jonathan Kagan (Childrens Hospital Boston, USA)

Regulation of Innate immune Signaling.

11:50-12:15

Cem Gabay (University of Geneva, Switzerland)

IL18 and IL18BP in macrophage activation syndrome.

12:15-12:25

Short Talk; Rajendra Karki

O30 - The NLRC4 inflammasome requires IRF8-dependent production of NAIPS

12:25-12:35

Short Talk; Sagi Shapira

O31 - germ-cell specific inflammasome component NLRP14 negatively regulates cytosolic nucleic acid sensing to promote fertilization

11:00-12:45 Symposium 16 (Parallel) Infection and Immunity

11:00-11:25 **Hiroki Yoshida** (Saga University, Japan)

Novel immune evasion strategy of *P. gingivalis* via inhibitory receptor, Siglec

11:25-11:50 **Chris Hunter** (UPenn, USA)

IL-27 - still inhibiting after all these years

11:50-12:15 **Katrin Mayer-Barber** (NIAID, NIH)

Innate Inflammatory Cytokines and effector cells in Host Resistance to Tuberculosis

12:15-12:25 **Short Talk; Melanie M Brinkmann**

O32 - The multifaceted M152 protein selectively modulates sting-dependent signaling to enhance murine cytomegalovirus replication

12:25-12:35 **Short Talk; Kate E Lawlor**

O33 - Activation of mitochondrial apoptotic signaling triggers NLRP3 inflammasome activation

12:45-1:45 TRAINEE WORKSHOPS (3 Parallel Sessions)

Session A; Cancer

12:55-1:00 **Chair**

1:00-1:10 **Javier Mora**

O34 - IL-38 restricts anti-tumor immunity by limiting IL-17 production from gamma-delta T cells through IL1RAPL1

1:10-1:20 **Ya-Shan Chen**

O35 - Significant reduction of tumor growth and metastasis by intratumor treatment of a SHRNA targeting IL-17RA in a murine B16F10 melanoma model

1:20-1:30 **Ashish Dhir**

O36 - Mitochondrial double stranded RNA triggers antiviral signalling in human

1:30-1:40 **Rumela Chakrabarti**

O37 - ELF5 regulated interferon signaling in triple negative breast cancer

1:40-1:50 **Min-Kyung Choo** **CYT18-ABS-1301**

O38 - Myeloid P38 MAPK promotes tumorigenesis by suppressing cytotoxic T cell recruitment

Session B; Innate Immunity

12:55-1:00 **Chair**

1:00-1:10 **Yunhao Tan**

O39 - A programmable signaling complex controls cell fate decisions upon toll-like receptor activation

1:10-1:20 **Saurabh Chattopadhyay**

O40 - A new antiviral ISG TDRD7 inhibits cellular autophagy to control virus replication

1:20-1:30 **Ashley Mansell**

O41 - New tricks for an old dog: non-canonical STAT3 mediates TLR4 mitochondrial reprogramming and inflammation

1:30-1:40 **Helene Minyi Liu**

O42 - The moonlighting protein 14-3-3 ETA controls MDA5 activation and the MDA5-dependent antiviral innate immunity

1:40-1:50 **David Hare**

O43 - Important differences in the IFN-I response to DNA and RNA virus particles

Session C; Cytokine Regulation

12:55-1:00 **Chair**

1:00-1:10 **Jeongho Park**

O44 - IL-27P28 is an antagonist of B cell response during toxoplasmosis

1:10-1:20 **Eirini Giannoudaki**

- O45 - IL-36 cytokines alter the composition of the intestinal microbiome to protect against obesity and metabolic dysfunction
- 1:20-1:30** **Chris D Slade**
- O46 - Placenta-specific 8 suppresses interferon gamma production by TH1 cells
- 1:30-1:40** **Ryoji Kawakami**
- O47 - Epigenetic landscape of FOXP3 enhancer sites during thymic FOXP3+ TREG development of CNS0- and cNS3-deficient mice
- 1:40-1:50** **Xingrong Du**
- O48 - HIPPO/MST signaling couples metabolic state and function of CD8A+ dendritic cells for cytotoxic T-cell priming
- 2.00-3:40** **Symposium 17: T cell regulation in Cancer**
- 2:00-2:25 **Ananda Goldrath** (UCSD, USA)
Transcriptional Regulation of T cell residency in tissues and tumors
- 2.25-2.50 **Andrew Luster** (HMS, USA)
Chemokines in cancer immunotherapy
- 2:50-3:15 **Wenjun Ouyang** (Amgen, USA)
Cytokine pathways on tumor infiltrating T cells revealed by single cell RNAseq
- 3:15 – 3:25 **Short Talk; Tuoqi Wu**
O49 - Cytokine and transcriptional regulation of stem cell-like CD8 T cells
- 3:25 – 3:35 **Short Talk; Saikat Majumder**
O50 - IL-17 drives the bio-energetic activity of lymph node fibroblastic reticular cells to promote expansion during TH17 cell activation
- 2.00-3:40** **Symposium 18 (Parallel): Sponsored Symposium - Japanese Society for Interferon and Cytokine Research (JSICR)**
- 2:0-2:25 **Masato Kubo** (Tokyo University of Science, Japan)
Th2 cytokines in allergic responses; from Th2 to ILC2
- 2.25-2.50 **Masaaki Murakami** (Hokkaido University, Japan)
Gateway Reflex, a new concept in Neuroimmunology coming from IL-6 discovery
- 2:50-3:15 **Masato Tanaka** (Tokyo University, Japan)
Resolution of inflammation and tissue repair by immunoregulatory monocytes
- 3:15-3:40 **Akinori Takaoka** (Hokkaido University, Japan)
Interferons and innate immunity
- 3:40 – 3:55** **COFFEE BREAK**
- 3.55 - 6:00** **Plenary III: Tissue specific responses - Gut, Lung and Lymph nodes**
- 3:55 – 4:25 **Giorgio Trincerì** (NCI, NIH, USA) **Bill Paul Awardee**
[Title]
- 4:25 – 4:50 **Yasmine Belkaid** (NIH, USA)
Control of tissue immunity and repair by the microbiota
- 4:50 – 5:25 **KEYNOTE SPEAK 3. David Artis** (Cornell, NY, USA)
Cytokine Regulation of Chronic Inflammation
- 5:25 – 5:30** **CONFERENCE WRAP UP invitation to Cytokines 2019 in Vienna**
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