



# International $\gamma\delta$ T cell conference

20-23 June 2023  
Lisbon, Portugal

## PROGRAM IN DETAIL

CP – Chairperson  
OP – Oral Presentation  
SP – Sponsor Presentation

### DAY 1 | Tuesday 20<sup>th</sup> June

- 13h00 Registration
- 14h30 **Welcome Address**  
Bruno Silva-Santos & Julie Ribot
- 15h00 **Session 1**  
**Ligands & Repertoires**  
Chairs: Erin Adams & Ben Willcox
- CP1. Emerging principles from the Age of  $\gamma\delta$  TCR ligand Discovery**  
Ben Willcox, University of Birmingham, United Kingdom
- OP1. V $\gamma$ 9V $\delta$ 2 T cells recognize butyrophilin 2A1 and 3A1 heteromers**  
Adam Uldrich, University of Melbourne, Australia
- OP2. Phosphoantigens are molecular glues that promote butyrophilin 3A1/2A1 association leading to V $\gamma$ 9V $\delta$ 2 T cell activation**  
Yonghui Zhang, Tsinghua University, China
- OP3. Division of labor and cooperation between different butyrophilin proteins in phosphoantigen-mediated activation of V $\gamma$ 9V $\delta$ 2 T cells**  
Mohindar Karunakaran, University of Würzburg, Germany
- 16h20 *Coffee break*
- 16h40 **OP4. Conserved mechanisms of CD1d recognition by V $\delta$ 1 T cell receptors**  
Mayuri Viswanathan, University of Chicago, USA
- OP5. Direct recognition of a cytokine receptor by mouse V $\delta$ 7  $\gamma\delta$ TCRs**  
Taras Kreslavsky, Karolinska Institute, Sweden
- OP6. Studying signaling initiation of the  $\gamma\delta$  TCR to improve  $\gamma\delta$  T cell-based immunotherapy against cancer**  
Marina Zintchenko, University of Freiburg, Germany
- OP7. Identification of invariant  $\gamma\delta$ TCR natural killer-like effector T cells in the naked mole-rat**  
Guillem Sanchez Sanchez, Université Libre de Bruxelles (ULB), Belgium
- 18h00 **Opening Keynote**  
Chair: Bruno Silva-Santos
- $\gamma\delta$  T cell biology: seeking *terra firma* amid oceans of uncertainty**  
Adrian Hayday  
Francis Crick Institute & King's College London, United Kingdom
- 19h00 (20h30) **Posters Day 1: Ligands & Repertoires; Development & Differentiation | Welcome reception**



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## DAY 2 | Wednesday 21<sup>st</sup> June

### 9h30 **Session 2**

#### **Development & Differentiation**

Chairs: Dan Pennington & Michele Anderson

#### **CP2. Tuning TCR signal strength to regulate $\gamma\delta$ T cell fate choices**

Michele Anderson, University of Toronto, Canada

#### **OP8. $\gamma\mu$ T cells are diverse, tissue resident, and uniquely mammalian T cells found only in extant marsupials and monotremes**

Robert Miller, Center for Evolutionary and Theoretical Immunology, University of New Mexico, USA

#### **OP9. Skint1 is a long-sought DETC TCR ligand, collaborating with Skint2 to drive DETC development**

Leticia Monin, The Francis Crick Institute, United Kingdom

#### **OP10. Selection of $\gamma\delta$ T cells is restricted by MHC-I-associated peptide presentation by cortical thymic epithelial cells**

Helen Wang, University of Toronto, Canada

### 11h00 *Coffee break*

#### **OP11. Dissection of the IFN- $\gamma$ versus IL-17-specific transcriptomes of $\gamma\delta$ T cells: a new role for signaling adaptor Themis**

Daniel Inácio, Instituto de Medicina Molecular João Lobo Antunes, Portugal

#### **OP12. Understanding perinatal thymic-derived CD8 $\alpha\beta$ -expressing $\gamma\delta$ T cells: a novel innate IFN $\gamma$ -producing population that shares developmental characteristics with innate-like CD8 $\beta$ -expressing $\alpha\beta$ T cells**

Nital Sumaria, Blizard Institute, Queen Mary University of London, United Kingdom

#### **OP13. E protein control of NK $\gamma\delta$ T cell development through both generation and function of the stereotypic V $\gamma$ 1V $\delta$ 6.3 $\gamma\delta$ TCR**

David Wiest, Fox Chase Cancer Center, USA

#### **OP14. Regulation of innate T $\gamma\delta$ 17 cell plasticity by bZIP transcription factors**

Maria Ciofani, Duke University Medical Center, USA

### 12h45 **Posters Day 2: Infection; Tissues & Inflammation | Lunch**

### 15h00 **Session 3**

#### **Infection**

Chairs: Matthias Eberl & Julie Déchanet-Merville

#### **CP3. Can gamma-delta T cells help us to decipher immune response to viruses?**

Julie Déchanet-Merville, Université de Bordeaux, France

#### **OP15. Investigating the consequence of MCMV infection on $\gamma\delta$ T cells across the ages**

Brandi L. Clark, St. Jude Children's Research Hospital, USA

#### **OP16. Targeting the latent HIV-1 reservoir with ex vivo expanded allogeneic V $\delta$ 2 T cells**

Brendan T. Mann, George Washington University, USA

#### **OP17. Spatially resolved single cell transcriptomics reveal a critical role for $\gamma\delta$ T cells in the control of skin inflammation and subcutaneous adipose wasting during chronic *Trypanosoma brucei* infection**

Matthew C. Sinton, University of Glasgow, United Kingdom

### 16h20 *Coffee break*

#### **OP18. Dermal $\gamma\delta$ 17 T cells orchestrate innate and adaptive immunity in distal organs during nematode infection**

Pedro H. Papotto, Lydia Becker Institute for Immunology & Infection, University of Manchester, United Kingdom

#### **OP19. New players in neonatal bacterial meningitis: The role of meningeal $\gamma\delta$ T cells**

Inês Lorga, Institute for Research and Innovation in Health, Portugal

#### **OP20. In-depth immune profiling of $\gamma\delta$ T cells within a longitudinal cohort of preterm neonates identifies expansion of fetal-derived activated HLA-DR+, CD86+ and CXCR5+ V $\gamma$ 9V $\delta$ 2 T cells upon neonatal sepsis**

Ximena León-Lara, Institute of Immunology, Hannover Medical School, Germany

#### **OP21. BCG vaccination induces clonal expansion, pro-inflammatory functions, and cytotoxicity in V $\delta$ 1 T cells**

Megan D. Maerz, University of Washington, USA

### 19h00 **Conference Get Together**



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## DAY 3 | Thursday 22<sup>nd</sup> June

9h30

### Session 4 Cancer Responses

Chairs: Jessica Strid & Noel de Miranda

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#### CP4. $\gamma\delta$ T cells as effectors of cancer immunity and immunotherapy

Noel de Miranda, Leiden University Medical Centre, The Netherlands

#### OP22. Tumor specific $\gamma\delta$ T cells expand and respond to PD-1 blockade

Scott C. Lien, University of Toronto, Canada

#### OP23. PD-1 defines a distinct, functional, tissue-adapted state in V $\delta$ 1 T cells with implications for cancer immunotherapy

Daniel Davies, King's College London, United Kingdom

#### OP24. Expression of immune checkpoint molecules on $\gamma\delta$ T cells and their role in colorectal cancer

Marta Di Simone, University of Palermo, Italy

11h00

Coffee break

11h20

#### OP25. Genome-wide CRISPR screens decode cancer cell pathways that trigger $\gamma\delta$ T cell detection and killing

Murad Mamedov, Gladstone Institutes, USA

#### OP26. Regulatory T cell depletion unleashes an IFN $\gamma$ + $\gamma\delta$ T cell response in the tumor microenvironment

André Vaz-Pinto, Institute of Systems Immunology, Germany & Instituto de Medicina Molecular, Portugal

#### OP27. Interplay between CD27+ $\gamma\delta$ T cells and tumor-associated macrophages derails protective role of CD27- $\gamma\delta$ T cells in lung adenocarcinoma

Ximena L. Raffo, Cancer Research UK Beatson Institute, United Kingdom

#### OP28. An Orwellian requirement for TCR $\gamma\delta$ in $\gamma\delta$ T cell-mediated cancer surveillance

Anna-Maria Mavrigiannaki, Francis Crick Institute, United Kingdom

12h45

### Posters Day 3: Cancer Responses & Therapies | Lunch

15h00

### Session 5 Cancer Therapies

Chairs: Seth Coffelt & Richard Lopez

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#### CP5. Harder, Better, Faster, Stronger...

Richard Lopez, Duke University, USA

#### OP29. Phosphonate-Antibody-Drug Conjugates: a novel immunostimulatory class of ADCs driving inside-out activation of V $\gamma$ 9V $\delta$ 2 T cells by precise tumor-targeting

Mary van Helden, Byondis B.V., The Netherlands

#### OP30. Single-Cell Signalling Analysis of Engineered $\gamma\delta$ T Cell Biotherapeutics for the Treatment of Colorectal Cancer

Callum Nattress, University College London Cancer Institute, United Kingdom

#### OP31. Optimized Gamma-Delta T-Cell Receptors for Cancer Therapy

Marc Rigau, Peter Doherty Institute for Infection and Immunity, University of Melbourne, Australia

#### SP1. ImCheck Therapeutics

Paul Frohna

16h40

Coffee break

17h00

#### SP2. Takeda

Rosa Ng

#### OP32. Molecular determinants of Acute Myeloid Leukemia targeting by Delta One T cells

Sofia Mensurado, Instituto de Medicina Molecular João Lobo Antunes, Portugal

#### OP33. Finetuning $\gamma\delta$ CAR T cell function against solid tumors via hypoxia sensing

Charles Agbuduwe, Institute of Child Health, University College London, United Kingdom

#### OP34. Efficacy and biodistribution of $\gamma\delta$ PSCA-CAR T cells in combination with zoledronate in a model of bone metastatic prostate cancer

Leticia Tordesillas, H. Lee Moffitt Cancer Center & Research Institute, USA

#### OP35. Optimizing the efficacy of Gamma delta TCR Anti-CD3 Bispecific T cell engager (GAB) for the treatment of cancer

Dennis Beringer, Center for Translational Immunology, University Medical Center Utrecht, The Netherlands

Free evening - suggestion: head to Bairro Alto (Lisbon's "Soho") for dinner ;)



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## DAY 4 | Friday 23<sup>rd</sup> June

9h30 **Session 6**

### **Tissues & Inflammation**

Chairs: Immo Prinz & Karen Edelblum

#### **CP6. Tissue-specific roles for $\gamma\delta$ T cells in inflammation**

Karen Edelblum, Icahn School of Medicine at Mount Sinai, USA

**OP36. CD103 is a key marker of colonic  $\gamma\delta$  T cell status and is dysregulated in IBD with implications for prognosis**

Robin Dart, King's College London, United Kingdom

**OP37. Multimodal digital histology analyses reveal a human splenic  $\gamma\delta$  T cell compartment localised for MHC-independent immunosurveillance of the erythroid niche**

Taher E. Taher, Institute of Immunology and Immunotherapy, University of Birmingham, United Kingdom

**OP38.  $\gamma\delta$  and  $\alpha\beta$  T cells in the human lung and associated lymph nodes diverge into resident tissue-regulatory and CTL clonotypes**

Likai Tan, Institute of Systems Immunology, University Medical Center Hamburg-Eppendorf, Germany

11h00 *Coffee break*

11h20 **OP39. Heterogeneity, plasticity, and tissue residency hallmarks of  $\gamma\delta$  T cells across organs**

Sagar, Freiburg University Medical Center, Germany

**OP40. Investigating gut microbiota determinants of IL-17-producing  $\gamma\delta$  T cells during early life**

Bavanitha Thurairajah, McGill University Health Center, Canada

**OP41. Circadian expression of IL-17A by adipose  $\gamma\delta$  T cells maintains de novo lipogenesis rhythm in adipose tissue**

Lydia Lynch, Trinity College Dublin, Ireland & Harvard Medical School, USA

**OP42. Innate tissue immunosurveillance shows real-time dependence on TCR $\gamma\delta$**

Miguel Muñoz-Ruiz, Francis Crick Institute & King's College London, United Kingdom

12h30 **Closing Keynote**

Chair: Julie Ribot

### **Neuroimmune ecosystems**

**Henrique Veiga-Fernandes**

Champalimaud Centre for the Unknown, Portugal

13h10 **Concluding remarks & Awards**

Bruno Silva-Santos & Julie Ribot

*Evening suggestion (if staying longer): "São João" street (food + music) festival in Alfama (Lisbon's oldest neighborhood)*