



APPW24

Cairns | 27-30 May 2024

www.appw2024.org

Workshop Program

Day 1 | Monday, 27 May 2024

Opening Session

Chairperson: Nicole la Gruta

09:00

Welcome and Official Opening
Jose Villandangos, APPW 2024 Chair

NILAB SHASTRI Memorial Lecture

Invited Speaker

09:15

Probing Nature's Gene Chips: A tribute to Nilabh Shastri
Jonathan Yewdell

Long Oral Presentation

10:00

A quantitative, multiple epitope approach reveals general correlates of antigen presentation and immunogenicity for antiviral CD8+ T cells
David Tscharke

10:10

Two peptides whose processing depends on the BRAAP activity of the proteasome
Nathalie Vigneron

10:30

Morning Tea

11:00

Identification of MHC ligands

Chairperson: Patricia Illing, Brian Dolan

Invited Speaker

11:00

The biology of antigen processing revealed through the lens of immunopeptidomics
Anthony Purcell

11:25

Great expectations: How Immunopeptidomics is shaping Precision Medicine
Nicola Ternette

Long Oral Presentation

11:50 The immune system has a sweet tooth! Targeted analysis of the glycosylated immunopeptidome
Nathan Croft

12:00 Cryptic MHC-E epitope from influenza virus elicits a potent cytolytic T cell response
Michael Hogan

Short Oral Presentation

12:10 NanoBiT technology Enables Real-time Measurement of Peptide Generation and Transport in Living Cells
Jaroslav Holly

12:15 Exploiting bioorthogonal chemistry to study antigen presentation
Amy Kessler

12:30 **Lunch**

14:00 **Cell Biology of the MHC-I pathway**
Chairperson: Emma Grant, Paul Roche

Invited Speaker

14:00 MHC-I antigen processing mechanisms in bats
Peter Cresswell

Long Oral Presentation

14:25 Molluscum contagiosum virus has co-opted an Rnf145/Pcyox1I dependent ERAD pathway for MHC-I downregulation
Daved Fremont

14:35 Interactome of MHC class I molecules
Jacques Thibodeau

14:45 Elucidating the regulatory pathways that control dendritic cell-mediated damage recognition and cross-presentation via Clec9A
Mireille Lahoud

Invited Speaker

14:55 Endosomal Assembly of HLA class I molecules
Malini Raghavan

15:30 **Afternoon Tea**

16:00 Antigen Presentation in Infection
Chairperson: Justine Mintern, Andrew Harman

Invited Speakers

16:00 Promiscuous generalist and fastidious specialist MHC molecules in resistance to infectious pathogens
Jim Kaufman

16:25 A common allele of HLA is associated with asymptomatic SARS-CoV-2 infection
Demetra Chatzileontiadou

Long Oral Presentation

16:50 The curious case of influenza A virus negative strand RNA encoded peptides: new viral gene products, non-functional peptides, or both?
Amir Ghorbani

Invited Speaker

17:00 Invited lecture by Hidde Ploegh
Hidde Ploegh

Exhibition Hall

17:30 - 18:30 **Welcome Reception**

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Workshop Program Day 2 | Tuesday, 28 May 2024

MHC Chaperones, Processing & Loading 1

Chairperson: Hamish McWilliam, Daisy Dastpeyman

Invited Speaker

08:30 From Antigens to Defense: Cellular Machineries in Quality Control and Adaptive Immunity

Robert Tampé

08:55 Peptide-induced conformational changes drive reglucosylation of HLA-A*02:01 by UGGT1

Najla Arshad

Long Oral Presentation

09:20 Deciphering the dynamics of the peptide loading complex in membrane environment

Darja Cernova

Short Oral Presentation

09:30 An Arginine at Position 156 in HLA Class I Enables TAPBPR-mediated Diversification of the Peptide Repertoire

Arwen Altenburg

Invited Speaker

09:35 Mechanisms of functional variability between ERAP1 allotypes

Efstratios Stratikos

10:00 New insights into the influence of TAPBPR on MHC-I peptide selection

Louise Boyle

10:30 Morning Tea

11:00	Non Classical MHC presentation Chairperson: Gavin Painter, Victoria Letoga
	Invited Speaker
11:00	A semi-conserved population of TRAV26+ type II Natural Killer T cells recognise CD1d independently of bound lipids Catarina Almeida
	Long Oral Presentation
11:25	Molecular mechanisms of unconventional lipid antigen display to T cells Adam Shahine
11:35	Cigarette smoke components can modulate the MR1-MAIT axis Wael Awad
11:45	Macrophages capture and present metabolite antigens in vivo for MAIT cell immunity Jieru Deng
	Short Oral Presentation
11:55	Endothelial antigen presentation in cancer Kyunghee Choi
	Invited Speaker
12:00	Towards harnessing mucosal-associated invariant T cells for immune protection in Aspergillus fumigatus infection Alexandra Corbett
12:30	Lunch
14:00	Antigen Presentation in Cancer Chairperson: Peter van Endert, Kirti Pandey
	Invited Speaker
14:00	Human cDC1 dendritic cells as cancer therapeutics Kristen Radford
	Long Oral Presentation
14:25	Epigenetic mechanisms of MHC class I regulation in cancer Marian Burr
14:35	Deconvoluting cancer immunopeptidome; one modification at a time Kirti Pandey

Short Oral Presentation

- 14:45** Cross-presentation from live cells by human pDC, cDC2 and cDC1, but not AS-DC
Anne Hosmalin
- 14:50** Lineage-specific epigenetic regulation of MHC class II gene expression in cancer
Chelisa Cardinez
- 14:55** MLN4924 treatment alters the MHC class I immunopeptidome without inhibiting direct antigen presentation
Brian Dolan

Invited Speaker

- 15:00** Identification of a gene that regulates the MHC I pathway and its potential role in cancer immune evasion
Kenneth Rock

15:30 Afternoon Tea

16:00 Cross-presentation: molecular, cellular and functional aspects

Chairperson: Anne Hosmalin, Zoe Chua

Invited Speaker

- 16:00** Perforin-2: a pore-forming effector of endocytic escape in cross-presenting dendritic cells
Patrycja Kozik
- 16:25** Batf3-dependent cross-priming by splenic Siglec1+ macrophages provides protective immunity against blood-borne tumors
Peter Van Endert

Long Oral Presentation

- 16:50** Quantifying Molecular Glycan-Lectin Binding Parameters for Efficient Cross-Presentation
Kas Steuten

Invited Speaker

- 17:00** Antigen processing and tumor immunity
Florian Winau

Exhibition Hall

- 17:30**
- **Poster Networking Session**
18:00

Social Program

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Workshop Program

Day 3 | Wednesday, 29 May 2024

08:30 Structural and Biophysical Studies of Antigen Presentation

Chairperson: Stephanie Gras, Matthew Witney

Invited Speaker

08:30 T cell sensitivity via dynamic allostery
Brian Baker

08:55 Conformational coding of catalyzed peptide exchange
Christian Freund

Long Oral Presentations

09:20 Insights into the role and kinetics of cysteine-drug adduct formation in penicillin allergy
Shawn Goh

Invited Speaker

09:30 Structural definition of MHC-I epitopic sites explains anti-tumor and anti-viral effects of pan anti-MHC-I mAb.
David Margulies

09:55 Illuminating MHC-I Antigen Processing Through An Integrative NMR, CryoEM And Protein Engineering Approach
Nikolaos Sgourakis

10:30 Morning Tea

11:00 Free networking & Tours

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Day 4 | Thursday, 20 May 2024

08:30 **APC Biology**
Chairperson: Kristen Radford, Kyunghee Choi
Invited Speaker

08:30 Allergic priming by skin dendritic cells
Franca Ronchese

08:55 Intracellular regulation of MR1: highly non-classical
Hamish McWilliam

Short Oral Presentations

09:20 Human lymphoid organ fibroblasts engage in antigen uptake and cross-presentation
Zoe Chua

09:25 Unravelling the interferon signature during influenza virus infection
Chloe Shepherd

09:30 Functional Characterisation of Newly Defined Human Epithelial Antigen Presenting Cells.
Daniel Buffa

Invited Speaker

09:40 Class II can be fun too! HLA-DR polymorphism & peptide presentation impact on T cell response
Stephanie Gras

10:05 Type I interferons induce an epigenetically distinct antigen-specific memory B cell population in chronic viral infection
Kim Good-Jacobson

10:30 **Morning Tea**

11:00 Antigen Presentation in Vaccination

Chairperson: Jieru Deng, David Tschärke

Invited Speaker

11:00 Development of subunit vaccines based on peptides and mRNA for Malaria
Gavin Painter

11:25 Relative contributions of endogenous and indirect MHC class II antigen processing to the CD4+ T cell response to intramuscular mRNA vaccination
Laurence Eisenlohr

Long Oral Presentation

11:50 Mitochondria-mediated antigen-presentation by MHC Class I
Wenbin Ma

Invited Speaker

12:00 Delivering vaccines where they need to go
Justine Mintern

12:30 Lunch

13:30 MHC Chaperones, Processing & Loading 2

Chairperson: Sophie Reffla, Najla Arshad

Invited Speaker

13:30 HLA-DO/H2-O plays important roles in thymic selection and CD4 memory T cell development
Scheherazade Sadegh-Nasseri

Long Oral Presentation

13:55 First-In-Class Inhibitors of Erap1 Generate Novel Cancer Antigens as Targets for MHC-I-Directed Therapies
Wayne Paes

14:05 A combinatorial approach reveals a suite of commonly presented HLA-E-restricted cancer antigens
Gabriel Goncalves

Short Oral Presentations

14:15 Utilising antibody-mediated delivery of TAPBPR to label target cells with immunoreactive antigens
Jack Morley

14:20 Characterisation of novel influenza-derived HLA-B*18:01-restricted epitopes
Emma Grant

14:25 Targeting ERAP1 to overcome resistance to cancer immunotherapy
Doriana Fruci

Invited Speaker

14:30 Architecture of F pocket affects peptide binding and stability of type 1 diabetes-associated HLA-B39 allotypes
Malgorzata Garstka

15:00 Afternoon Tea

15:30 T Cell Antigen Recognition

Chairperson: Anthony Purcell, Catarina Almeida

Invited Speaker

15:30 SARS-CoV-2 specific T cell recognition against variants
Chihiro Motozono

Long Oral Presentation

15:55 Uncovering the molecular basis of $\gamma\delta$ T cell activation
Ben Gully

16:05 Prior infection with unrelated neurotropic virus exacerbates influenza disease and impairs lung T cell responses
Lukasz Kedzierski

16:15 Title TBA
Jose Villadangos

Invited Speaker

16:25 Specificity matters: T cell responses to infections and tumors
Paul Thomas

Session Closing Ceremony

Chairperson: Jose Villadangos

APPW 2024 Emil Unanue Memorial Lecture

Invited Speaker

17:00 Plasticity of the MHC II Ligandome
Laura Santambrogio

17:45 **Closing Remarks**

Pullman International Cairns

18:30 **APPW 2024 Conference Dinner**

Social Program

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