

# 11<sup>th</sup> Annual Scientific Workshop

Crowne Plaza Hunter Valley  
9<sup>th</sup> - 11<sup>th</sup> June 2015

Day One: Wednesday, 9<sup>th</sup> June 2015  
ACH<sup>2</sup> / AVS Combined Session

12:00 – 13:00

**Redsalt Restaurant**

**Lunch**

**Sauvignon**

13:00 – 13:15

**Welcome**

Tony Cunningham (ACH<sup>2</sup>) and Peter Reville (ACHV)

13:15 – 14:15

**HIV Plenary - Associate Professor Vicente Planelles PhD**

Chair: Tony Cunningham

Title: Latency establishment and other immune evasion mechanisms by HIV

14:15 – 15:00

**Joint Session 1**

**Title: Tackling the latent HIV reservoir**

Chairs: Con Sonza, TBC

14:15 – 14:30

**Bonnie Hiener**

[30266]

Panobinostat Nonselectively Activates Transcription from Quiescent HIV-1 Proviruses in HIV-infected Individuals on Long-term Suppressive Antiretroviral Therapy

14:30 – 14:45

**Jenny Anderson**

[30400]

Enrichment of HIV in cells that express CCR6 and CXCR3 in blood and rectal tissue in HIV-infected individuals on cART

14:45 – 15:00

**Anna Hearps**

[30346]

Detection of HIV DNA in monocytes from cART-treated HIV+ individuals with long-term viral suppression.

Day One: Wednesday, 9<sup>th</sup> June 2015  
ACH<sup>2</sup> / AVS Combined Session

15:00 – 15:15 Tony Cunningham

**A tribute to Professor Geoffrey Shellam**

15:15 – 15:45

**Galleria**

**Afternoon Tea**

**Sauvignon**

15:45 – 16:45

**HCV Plenary - Associate Professor Andrea Cox PhD**

Chair: Peter Revill

Title: Challenges in immunologic control of Hepatitis C virus infection

16:45 – 17:45

**Joint Session 2**

**Immune control of HCV**

Chairs: Peter Revill, Andrew Lloyd

16:45 – 17:00

**Eric Gowans**

[30324]

Intradermal delivery of DNA encoding HCV NS3 and perforin elicits robust cell mediated immunity in mice and pigs

17:00 – 17:15

**Michaela Lucas**

[30464]

Identifying T cell epitopes in the HCV Envelope protein using a reverse genomics approach

17:15 – 17:30

**Melanie Walker**

[30353]

Understanding the timing, breadth and potency of neutralising antibody responses against transmitted/founders.

17:30 – 17:45

**Rob Centre**

[30402]

Analytical tools for GLP and GMP manufacture of a novel HCV vaccine candidate, Delta3TM

17:45 – 18:30

**Recreation**

18:30

**Coaches depart for Hope Estate**

19:00 – 23:00

**ACH<sup>2</sup> / AVS Dinner – Hope Estate**

## Day Two: Thursday, 10<sup>th</sup> December 2015

**07:00 – 08:30**      **Redsalt Restaurant**

### **Breakfast**

**08:30 – 10:30**      **Semillon 1**

### **Joint Session 3**

#### **Innate, adaptive and clinical immunity**

Chairs: Rosemary Ffrench, Paul Cameron

**08:30 – 08:45**      **Abdullateef Alshehri**      [30322]

Defining the role of HIV-1 accessory proteins in blocking interferon induction by dysregulation of TBK1

**08:45 – 09:00**      **Najla Nasr**      [30046]

Mechanism of Interferon Stimulated Genes Induction in HIV-1 Infected Macrophages in the Absence of Interferon Production

**09:00 – 09:15**      **Anthony Jaworowski**      [30478]

NK cell activation and dysfunction, but not T cell or monocyte activation, persists for at least 12 months in HIV+ individuals following combination antiretroviral therapy.

**09:15 – 09:30**      **SweeLin Chen Yi Mei**      [30467]

Toll-like receptor expression and pro-inflammatory cytokine levels in peripheral blood mononuclear cells correlate with clinical outcomes in acute hepatitis C infection

**09:30 – 09:45**      **Clovis Palmer**      [30397]

Analysis of metabolic checkpoints to study immune responses during viral infections

**09:45 – 10:00**      **Gareth Burns**      [30470]

Determinants of sustained virological response after discontinuation of long-term nucleoside analogue therapy in chronic hepatitis B patients

**10:00 – 10:15**      **Jackie Yu**      [30440]

An immune function biomarker is associated with early clinical events following liver transplantation

## Day Two: Thursday, 10<sup>th</sup> December 2015

<b>10:15 – 10:30</b>	<b>Di Yu</b>	[30465]
	Develop a super-agonist antibody to human interleukine-21 as a novel immunotherapy to treat chronic viral infection	
<b>10:30 – 11:00</b>	<b>Pre-function Area &amp; Terrace</b>	
	<b>Morning Tea</b>	
<b>11:00 – 12:45</b>	<b>Semillon 1</b>	
	<b>Concurrent Session 4a</b>	
	<b>HIV early replication</b>	
	Chairs: David Harrich, Kirstie Bertram	
<b>11:00 – 11:15</b>	<b>Till Böcking</b>	[30282]
	Dissecting HIV uncoating – one core at a time	
<b>11:15 – 11:30</b>	<b>Vaibhav Shah</b>	[30278]
	Understanding HIV-1 uncoating and its modulation by host cell factors at the single-molecule level	
<b>11:30 – 11:45</b>	<b>Chantal Marquez</b>	[30273]
	Visualising HIV-1 uncoating in virus-like particles at the single-particle level	
<b>11:45 – 12:00</b>	<b>Derrick Lau</b>	[30285]
	Reconstitution of HIV capsid self-assembly and disassembly for fluorescence microscopy	
<b>12:00 – 12:15</b>	<b>Daniel Rawle</b>	[29824]
	Analysis of the HIV-1 RT:eEF1A protein interaction as a potential HIV-1 drug target	
<b>12:15 – 12:30</b>	<b>Sarah Wang</b>	[30009]
	Mutational analysis of a potent antiviral HIV-1 protein	
<b>12:30 – 12:45</b>	<b>Lina Rustanti</b>	[30305]
	Enhancement of nullbasic lentivirus transduction efficiency on t-cells by using nullbasic antagonists	

## Day Two: Thursday, 10<sup>th</sup> December 2015

11:00 – 12:30

### Semillon 3

#### Concurrent Session 4b

#### Title: Hepatitis Phylogenetics

Chairs: Rowena Bull, Margaret Littlejohn

11:00 – 11:15

**Margaret Littlejohn**

[29953]

Hepatitis Delta Virus in Australia

11:15 – 11:30

**Sofia Bartlett**

[30284]

Molecular transmission network of recently acquired HCV in Australia

11:30 – 11:45

**Chaturaka Rodrigo**

[30106]

Global molecular epidemiology of acute hepatitis C infection via phylogenetic analysis of full length genomes across nine international cohorts

11:45 – 12:00

**Brigid Betz-Stablein**

[30280]

Evolution of a complex population of HBV variants in a patient with chronic hepatitis over 25 years of infection

12:00 – 12:15

**Preston Leung**

[30325]

Identification of co-evolving mutations in Hepatitis C Virus (HCV) in the context of immune escape against neutralizing antibody responses using a bioinformatics workflow

12:15 – 12:45

**Recreation**

12:45 – 13:45

**Redsalt Restaurant**

**Lunch**

**Lunch with international guests**

**Shiraz**

**ACH<sup>2</sup> Executive Meeting & Working Lunch**

## Day Two: Thursday, 10<sup>th</sup> December 2015

13:45 – 15:45

### Semillon 1

#### Joint Session 5 Vaccine development

Chairs: Damian Purcell, Kumar Visvanathan

13:45 – 14:00

**Timothy Patton**

[30368]

MicroCube and Dendritic Cell Interactions: Elucidating the Immunogenic Potential of a Novel Vaccine Platform

14:00 – 14:15

**Danushka Wijesundara**

[30085]

A cytolytic DNA vaccine to target cross-presentation of dendritic cells

14:15 – 14:30

**Jason Gummow**

[30428]

A multi-antigenic DNA vaccine that induces broad HCV-specific T-cell responses in mice

14:30 – 14:45

**Christopher Gonelli**

[30452]

Development of virus-like particles as immunogens for HIV-1 envelope glycoprotein

14:45 – 15:00

**Khamis Tomusange**

[30251]

Intranasal vaccination with a replication-competent recombinant human rhinovirus cocktail vaccine encoding HIV Gag and Tat generates HIV-specific immunity

15:00 – 15:15

**Hannah King**

[30380]

Targeting HIV immunogens to immune cells to enhance vaccine efficacy

15:15 – 15:30

**Stephen Kent**

[30292]

Studies to assess the affect of the neutralising anti-HIV antibody PGT121 against cell-associated SHIV

15:30 – 15:45

**Tarl Prow**

[29647]

Effective cutaneous vaccination using an inactivated chikungunya virus vaccine delivered by Foroderm

15:45 – 16:15

### Pre-function Area & Terrace

### Afternoon Tea

## Day Two: Thursday, 10<sup>th</sup> December 2015

16:15 – 18:00

### Semillon 1

#### Concurrent Session 6a HIV persistence and treatment

Chairs: Jenny Anderson, Anupriya Aggarwal

16:15 – 16:30

**Eunok Lee**

[29993]

Distinct HIV genetic populations in effector memory T-cells after prolonged therapy

16:30 – 16:45

**Thomas A Angelovich**

[30466]

Monocytes from HIV+ individuals have a pro-inflammatory phenotype and are hyper-responsive to LPS stimulation despite cART

16:45 – 17:00

**Tanveer Ahmed**

[30230]

Disease progression and immunological recovery in ART-treated HIV+ persons: The role of T cell metabolism

17:00 – 17:15

**Jori Symons**

[30446]

Analysis of HIV integrations sites using a novel, high throughput and sensitive assay in multiple latently infected cell lines: evidence of ongoing new rounds of infection

17:15 – 17:30

**Anni Winckelmann**

[30361]

Romidepsin nonselectively activates transcription from quiescent HIV-1 proviruses in HIV-infected individuals on long-term suppressive antiretroviral therapy

17:30 – 17:45

**Con Sonza**

[30369]

Chimeric cellular-HIV mRNAs in latently-infected T cells and their potential as targets for reactivation from latency

17:45 – 18:00

**Michelle Lee**

[30436]

Exploiting pathways of Tat expression as a novel approach to achieve reactivation of latent HIV-1

## Day Two: Thursday, 10<sup>th</sup> December 2015

- 16:15 – 17:30**      **Semillon 3**
- Concurrent Session 6b**
- Pathogenesis of hepatitis viruses**
- Chairs: Nick Shackel, Michaela Lucas
- 16:15 – 16:30**      **Zina Valaydon**      [30403]
- Virological characterization of Chronic Hepatitis B in Australia: high prevalence of variants associated with disease progression
- 16:30 – 16:45**      **Peter Revill**      [30479]
- Next generation sequencing shows that HBV basal core promoter variants are predictive of serological non-response to TDF therapy in HBeAg positive chronic hepatitis B
- 16:45 – 17:00**      **Bisma Rauff**      [30391]
- The role of macrophage colony stimulation factor (M-CSF) in Hepatitis C Virus (HCV) induced fibrosis
- 17:00 - 17:15**      **Magdalena Budzinska**      [30056]
- Deleterious Passenger Mutations as a Marker for Progression towards Liver Cancer
- 17:15 – 17:30**      **Surekha Tennakoon**      [30426]
- Intrahepatic CXCL-10 is strongly associated with markers of liver fibrosis in HIV-HBV co-infection
- 17:30 – 18:30**      **Semillon 3**
- ACHV Meeting**
- 18:30 – 19:00**      **Recreation**
- 19:00**      **Pergola**
- Dinner**

## Day Three: Friday, 11<sup>th</sup> June 2015

<b>07:00 – 08:30</b>	<b>Redsalt Restaurant</b>	
	<b>Breakfast</b>	
<b>08:30 – 10:00</b>	<b>Semillon 1</b>	
	<b>Joint Session 7</b>	
	<b>Diagnostics, therapeutics and resistance</b>	
	Chairs: David Anderson, Tanya Applegate	
<b>08:30 – 08:45</b>	<b>Francois Lamoury</b>	[30320]
	The role of dried blood spots in simplified HCV diagnosis, treatment monitoring and research	
<b>08:45 – 09:00</b>	<b>Berhan Haile</b>	
	Development and evaluation of a simple, filter paper-based method of plasma separation and storage to enhance accurate HIV treatment monitoring in resource limited settings	[29957]
<b>09:00 – 09:15</b>	<b>Kieran Cashin</b>	[30473]
	PhenoSeq: A Suite of Reliable Genotypic Tropism Tests for the Major HIV-1 Subtypes	
<b>09:15 – 09:30</b>	<b>Thomas Tu</b>	[30044]
	Developing cccDNA-targeting CRISPR therapies to clear Hepatitis B Virus infection	
<b>09:30 – 09:45</b>	<b>Alec Redwood</b>	[30456]
	In search of a virotope: Identification of herpesvirus specific CD8 T cells	
<b>09:45 – 10:00</b>	<b>Rebecca Pavlos</b>	[30449]
	Specific Binding Characteristics of HLA Alleles Associated with Cutaneous Nevirapine Hypersensitivity	
<b>10:00 – 10:15</b>	<b>Auda Eltahla</b>	[30427]
	Natural prevalence of HCV resistance-associated variants in treatment naïve patients across six genotypes	
<b>10:15 – 10:30</b>	<b>Damian Purcell</b>	[30480]
	Molecular characteristics and use of bovine IgG with broad HIV-1 neutralizing activity from colostrum of cows vaccinated with Env-gp140 trimers	

## Day Three: Friday, 11<sup>th</sup> June 2015

<b>10:30 – 11:00</b>	<b>Pre-function Area &amp; Terrace</b>	
	<b>Morning Tea</b>	
<b>11:00 – 12:30</b>	<b>Semillon 1</b>	
	<b>Concurrent Session 8a</b>	
	<b>HIV host cell interaction and transmission</b>	
	<b>Chairs: Andrew Harman, Anni Winckelmann</b>	
<b>11:00 – 11:15</b>	<b>Anupriya Aggarwal</b>	[30434]
	Defining the mechanisms of HIV filpodia formation	
		[29755]
<b>11:15 – 11:30</b>	<b>Rachel Botting</b>	
	Determining Key Human Mucosal Dendritic Cell Subsets in Transfer of HIV-1 to T Cells	
<b>11:30 – 11:45</b>	<b>Heeva Baharlou</b>	[29981]
	Analysing HIV Target Cells in the Human Anorectal Tract	
<b>11:45 – 12:00</b>	<b>Kirstie Bertram</b>	[30405]
	Investigating the Repertoire of Immune Subsets that Encounter HIV in Human Anogenital Tissues	
<b>12:00 – 12:15</b>	<b>Mkunde Chachage</b>	[30076]
	CD25+FoxP3+ memory CD4 T cells are frequent targets of HIV infection in vivo	
<b>12:15 – 12:30</b>	<b>Annemarie Laumaea</b>	[30422]
	Structure based screen of gp120-gp41 near neighbor contacts and their role in fusion activation and R5X4 tropism	
<b>11:00 – 12:30</b>	<b>Semillon 3</b>	
	<b>Concurrent Session 8b</b>	
	<b>HCV replication</b>	
	<b>Chairs: Nick Eyre, Auda Eltahla</b>	
<b>11:00 – 11:15</b>	<b>Gholamreza Haqshenas</b>	[30450]
	Host cell signalling response to hepatitis C virus	

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<b>11:15 – 11:30</b>	<b>Korri El Khobar</b>	[30367]
	Remodelling of b-actin in Hepatitis C Virus infected cells	
<b>11:30 – 11:45</b>	<b>Sakthi Priya Selvamani</b>	[30247]
	Mitochondrial changes in HCV infected hepatocytes	
<b>11:45 – 12:00</b>	<b>Mustafa Najim</b>	[30469]
	The role of coatmer protein COPI in establishment of HCV replication	
<b>12:00 – 12:15</b>	<b>Mark Douglas</b>	[30416]
	Isolation and Proteomic Characterisation of Double Membrane Vesicles from Hepatitis C Virus Infected Cells	
<b>12:15 – 12:30</b>	<b>Recreation</b>	
<b>12:30 – 13:15</b>	<b>Seasalt Restaurant</b>	
	<b>Lunch</b>	
<b>13:15 – 14:00</b>	<b>Semillon 1</b>	
<b>13:15 – 13:45</b>	<b>Awards Presentation</b>	
<b>13:45 – 14:00</b>	<b>Workshop Close</b>	
	Tony Cunningham	
	<b>Pre-function Area</b>	
	<b>Collect boxed afternoon tea</b>	
<b>14:15</b>	<b>Coaches depart for Sydney Domestic Airport</b>	