

## 6<sup>th</sup> Annual Workshop

Sebel Heritage, Yarra Valley, 23<sup>rd</sup> to 25<sup>th</sup> June 2010

### Day One: Wednesday, 23 June 2010

11:00 – 12:00	<b>Registration, Check-in and Refreshments</b>	
12:00 – 13:00	<b>Yarra Restaurant</b> <b>Buffet Lunch</b>	
13:00 – 13:15	<b>Marmion Room</b> <b>Welcome –</b> Tony Cunningham (ACH <sup>2</sup> ) and Michael Beard (ACHV)	
13:15 – 14:00	<b>HIV Plenary</b> <b>Professor Mario Stevenson</b> Title: Counteracting Forces in the replication of HIV-1 Chair: Gilda Tachedjian	
14:00 – 15:00	<b>Combined Session 1</b> <b>Virus Host Cell Interactions</b> Chair HIV: Damian Purcell Chair Hepatitis: Nicholas Eyre	
14:00 – 14:15	<b>Joe Torresi</b> Differential Modulation of STAT/SOCS Signaling in HBV/HCV-coinfection	[76]
14:15 – 14:30	<b>Marina Alexander</b> The interplay between Chromatin, Tat and Splicing: Histone deacetylase (HDAC) inhibitor Trichostatin A rescues poor transcription from an HIV splice mutant.	[1]
14:30 – 14:45	<b>Erin McCartney</b> The transcription factor STAT3 and regulation of HCV replication.	[46]
14:45 – 15:00	<b>Jenny Anderson</b> Probing APOBEC3 restriction of early HIV-1 replication	[4]

15:00 – 15:30 **Yarra Restaurant**

### Afternoon Tea

15:30 – 17:30 **Marmion Room**

### Concurrent Session 2a HIV Entry and Intracellular Events

Chair 1: Paul Gorry  
Chair 2: Andrew Harman

- 15:30 – 15:45 **Jasminka Sterjovski** [70]  
An altered and more efficient mechanism of CCR5 engagement contributes to macrophage tropism of CCR5-using HIV-1 Envelopes
- 15:45 – 16:00 **Paul Cameron** [10]  
Chemokine directed and spontaneous T cell migration facilitates latent HIV-1 infection in resting CD4+ T cells
- 16:00 – 16:15 **Stuart Turville** [77]  
HIV antennae on infected dendritic cells, represent fast rate, long distance means for membrane tethering prior to viral spread.
- 16:15 – 16:30 **Joey Lai** [40]  
Langerin oligomerisation enhances gp120 mediated binding of HIV-1.
- 16:30 – 16:45 **Paula Ellenberg** [19]  
Understanding the intracellular life-cycle of HIV-1 infection.
- 16:45 – 17:00 **Kylie Warren** [79]  
Cellular Factors and the Regulation of HIV-1 Replication.
- 17:00 – 17:15 **Candida da Fonseca Pereira** [16]  
Dynamics of viral proteins during the natural HIV-1 infection – insights from a biarsenical-tetracysteine fluorescent labeling method.
- 17:15 – 17:30 **Marcel Hijnen** [28]  
Maturation induces a structural reorganization of the HIV-1 GAG polyprotein

15:30 – 17:15 **Yarra Room**

### Concurrent Session 2b Hepatitis Immunology

Chair 1: Rose Ffrench  
Chair 2: Barb Cameron

- 15:30 – 15:45 **Mandvi Bharadwaj** [6]  
Novel measures for induction of effective Hepatitis C Virus-specific T-cell immunity
- 15:45 – 16:00 **Elizabeth Keoshkerian** [37]  
Characterising effector and regulatory T cell populations in Hepatitis C infection using multi-colour FACS.

16:00 – 16:15	<b>Benny Baharuddin</b> Role of HCV-specific T-cell metabolic pathways in predicting response to antiviral therapy.	[5]
16:15 – 16:30	<b>Rachel Wilson</b> Suppression of innate immunity by the hepatitis B e antigen.	[82]
16:30 – 16:45	<b>Mirna Hunter</b> The role of effector and regulatory T cells in hepatitis C infection outcomes	[31]
16:45 – 17:00	<b>Sumudu Narayana</b> Identification of novel interferon stimulated genes (ISGs) that control HCV <i>in vitro</i>	[50]
17:00 – 17:15	<b>Nam Nguyen</b> Differential gene expression of chemokine ligands within the portal and lobular compartments of the chronic HCV-infected liver is associated with a specific pattern of leucocyte subset infiltration.	[53]
17:15 – 18:00	<b>Free Time</b>	
18:00 – 19:00	<b>Yarra Restaurant</b>  <b>Pre Dinner Drinks</b>	
19:00	<b>Dinner</b>	

## Day Two: Thursday, 24 June 2010

7:00 - 8:45	<b>Yarra Restaurant</b>  <b>Breakfast</b>  <b>Junior scientist breakfast with the Professor</b>
8:45 – 9:30	<b>Marmion Room</b>  <b>Keynote Speaker</b> <b>Associate Professor Michael Gale Jr.</b> Title: Mechanisms of nonself recognition of hepatitis C virus and immune signalling regulation of HCV infection.
9:30 – 10:30	<b>Combined Session 3</b> <b>Innate Immunity</b> Chair 1: Chirani Ramashinge – HIV Chari 2: Andrew Lloyd - Hepatitis

<b>9:30 – 9:45</b>	<b>Anna Hearps</b> HIV and accelerated ageing of the innate immune system.	[27]
<b>9:45 – 10:00</b>	<b>Jessica Howell</b> HCV up-regulates toll-like receptor-mediated inflammatory cytokine production post liver transplantation.	[30]
<b>10:00 – 10:15</b>	<b>Najla Nasr</b> The induction of viperin in HIV-1 infected monocyte-derived macrophages has antiviral effects.	[51]
<b>10:15 – 10:30</b>	<b>Tali Lang</b> Human hepatitis B E antigens suppresses the innate immune response by targeting toll-like receptor function.	[41]
<b>10:30 – 11:00</b>	<b>Yarra Restaurant</b>  <b>Morning Tea</b>	
<b>11:00 – 12:45</b>	<b>Yarra Room</b>  <b>Concurrent Session 4a</b> <b>HIV immunity</b> Chair 1: Tony Cunningham Chair 2: Anna Hearps	
<b>11:00 – 11:15</b>	<b>Andrew Harman</b> Inhibition of Type 1 Interferon response by human immunodeficiency virus type 1 (HIV-1) in dendritic cells.	[25]
<b>11:15 – 11:30</b>	<b>Yang Xi</b> Characterisation of novel type I interferon epsilon and its use as a molecular adjuvant to enhance HIV-specific mucosal immunity	[85]
<b>11:30 – 11:45</b>	<b>Adam Johnson</b> Lactic acid, is a natural vaginal defence factor against HIV-1 and HSV-2.	[34]
<b>11:45 – 12:00</b>	<b>Sarah Mercier</b> The Maturation of HIV-1 infected Dendritic Cells Varies Depending on the Viral Preparation Method Used.	[48]
<b>12:00 – 12:15</b>	<b>Marjon Navis</b> Vpu-specific ADCC antibodies efficiently kill HIV-infected cells: implications for ADCC-inducing HIV vaccines.	[52]
<b>12:15 – 12:30</b>	<b>Gamze Isitman</b> Pol is a major target for ADCC responses.	[32]
<b>12:30 – 12:45</b>	<b>Amy Chung</b> Evidence of HIV Viral Escape from Natural Killer Cell-mediated Antibody Dependent Cellular Cytotoxicity.	[14]

11:00 – 12:45

## Marmion Room

### Concurrent Session 4b

#### Hepatitis Cellular and Molecular Virology

Chair 1: Joe Torresi

Chair 2: Clovis Palmer

11:00 – 11:15

**Ruth Chin**

Dysregulation of signal pathways implicated in cancer development during active HBV replication.

[13]

11:15 – 11:30

**Nicholas Eyre**

Dynamic imaging of hepatitis C virus assembly and secretion

[21]

11:30 – 11:45

**Korri El Khobar**

Dysregulation of Intracellular Signal Transduction in Hepatitis C and Its Implication in HCV Fibrosis.

[18]

11:45 – 12:00

**Kathleen Ryan**

Genotype specific regulation of the interleukin-1 signalling pathway by the Hepatitis B virus 22KDa precore protein.

[64]

12:00 – 12:15

**Peter Revill**

A novel hepatitis B virus HBeAg-negative variant associated with HIV co-infection alters protein expression in vitro.

[62]

12:15 – 12:45

### Free time

12:45 – 13:30

## Yarra Restaurant

### Lunch

13:30 – 15:30

## Yarra Room

### Concurrent Session 5a

#### HIV Vaccines

Chair 1: Ivan Stratov

Chair 2: Marcel Hijnen

13:30 – 13:45

**Damian Purcell**

Antigenic and Immunogenic Properties of Recombinant Envelope Glycoproteins derived from HIV-1 Pre-Seroconversion Strains.

[59]

13:45 – 14:00

**Robert Center**

Antigenicity and immunogenicity of brain-derived HIV-1 Env variants.

[11]

14:00 – 14:15

**Louise Hilton**

Engineering of Gag MicroCubes as a vaccine against HIV-1

[29]

14:15 – 14:30

**Amanda Brass**

Novel HIV gag MicroCube vaccine elicits strong humoral and cellular immune responses in murine immunogenicity study.

[7]

14:30 – 14:45	<b>Adam Wheatley</b> Knockdown of PERK (EIF2AK3) using engineered miRNA increases the immunogenicity of HIV-1 Env DNA vaccines in mice.	[81]
14:45 – 15:00	<b>Fan Wu</b> Evaluation of Immunity and Migration of Mucosal HIV-specific CD8+ T Cells following Prime-Boost Immunization.	[84]
15:00 – 15:15	<b>Charini Ramasinghe</b> Co-expression of IL-13 Inhibitors - An Effective Method to Enhance HIV-Specific CD8+ T Cell Avidity and Protective Immunity.	[60]
5:15 – 15:30	<b>Sinthujan Jegaskanda</b> Influenza vs. HIV: Which generates the best T-cell immunity?	[33]

13:30 – 15:30

## **Marmion Room**

### **Concurrent Session 5b**

#### **Hepatitis Virology**

Chair 1: Peter White

Chair 2: Nadia Warner

13:30 – 13:45	<b>Rahma Tohidi-Esfahani</b> Detection of Natural Antibodies in thymectomised ducks – an aid to DHBV Clearance	[75]
13:45 – 14:00	<b>Tanya Applegate</b> MN Azyme qPCR used to quantify multiple genotypes in Hepatitis C infection	[2]
14:00 – 14:15	<b>Rowena Bull</b> The evolutionary dynamics of hepatitis C virus: insights from deep sequencing analysis of early incidence cases. Part I – Viral diversity	[8]
14:15 – 14:30	<b>Fabio Luciani</b> The evolutionary dynamics of hepatitis C virus: Insights from deep sequencing analysis of early incidence cases. Part II - the founder virus.	[45]
14:30 – 14:45	<b>Tina Sozzi</b> Drug Resistance Phenotyping of HBV: New Problems and Paradigms.	[69]
14:45 – 15:00	<b>Peter Sugden</b> Detection of low-level hepatitis C virus in leucocytes of individuals who are apparently uninfected.	[72]
15:00 – 15:15	<b>Nadia Warner</b> Antiviral Drug Resistant HBV: Pathogenic Significance of the Altered Viral Envelope.	[78]
15:15 – 15:30	<b>Daniel Yuen</b> Improving the HCV pseudoviral particle infectivity assay by manipulation of cellular antiviral proteins.	[86]

15:30 – 16:00

## **Yarra Restaurant**

### **Afternoon Tea**

16:00 – 17:00

## Marmion Room

### Concurrent Session 6a HIV New Technologies

Chair 1: Con Sonza  
Chair 2: Lachlan Gray

16:00 – 16:15

**Amy Sexton**

Nanoengineered Layer-by-Layer capsules as a novel delivery system for HIV vaccines

[65]

16:15 – 16:30

**Megan Pate**

Developing an improved HIV-1 neutralization assay.

[55]

16:30 – 16:45

**Kate Jones**

A novel oligo-based fluorescent *in situ* hybridization (O-FISH) technique for the detection of single copy HIV-1 nucleic acids

[36]

16:45: - 17:00

**Jennifer La**

Targeting HIV-1 reverse transcriptase using fragment screening

[39]

16:00 – 17:00

## Yarra Room

### Concurrent Session 6b Hepatitis Vaccines

Chair 1: Mandvi Bharadwaj  
Chair 2: Katja Pfafferott

16:00 – 16:15

**Wan-Shoo Cheong**

Development of virus-like particles (VLPs) with distinguished complexity and assessment of their immunogenicity.

[12]

16:15 – 16:30

**Doug Johnson**

Recombinant Mammalian Cell-Derived HCV Virus-Like-Particles to Induce Neutralising Antibody Responses to HCV.

[35]

16:30 – 16:45

**Katja Pfafferott**

One Step closer to a CTL-based HCV vaccine.

[56]

16:45 – 17:00

**Kim Steegh**

Specific T-cell response among non-responders after completing HBV vaccination

[88]

17:00 – 18:00

## Marmion Room

### ACHV Annual General Meeting

17:00 – 18:00

## Yarra Room

### Concurrent Session 7 HIV Post Integration

Chair 1: Johnson Mak

Chair 2: Stuart Turville

17:00 – 17:15

#### Redmond Smyth

Mechanisms of HIV-1 diversity in its natural target cells

[67]

17:15 – 17:30

#### Lachlan Gray

Dissecting the role of Sp transcription factor binding sites on viral transcription in HIV-1 long terminal repeats derived from HIV-1 dementia patients

[23]

17:30 – 17:45

#### Haran Sivakumaran

Arginine Methylation Increases the Stability of HIV-1 Tat.

[66]

17:45 – 18:00

#### David Harrich

Nullbasic: an inhibitor of HIV-1 replication

[26]

18:00 – 18:45

### Free time

18:45

### Coaches depart Sebel Heritage for Restaurant

17:00 – 22:00

## Stones of the Yarra Valley

### Dinner

22:00

### Coaches depart Stones of the Yarra Valley

22:15

### Coaches arrive Sebel Heritage

## Day Three: Friday, 25 June 2010

7:00 – 8:45

## Yarra Restaurant

### Breakfast

8:45 – 9:45

## Marmion Room

### Clinical Session

Anne Mijch – HIV 2010 The View from Nextdoor

William Sievert - Can the placenta cure cirrhosis

Chair 1: Kumar Visvanathan

Chair 2: Stephen Kent



9:45 - 10:30

## Short Clinical Talks

9:45 – 10:00

**Jason Grebely - HCV**

Potential role for *IL28B* genotype in treatment decision-making in recent hepatitis C virus infection.

[24]

10:00 – 10:15

**Con Sonza - HIV**

Retention of Antiviral Activity following Vaginal Administration of a Dendrimer-based Microbicide Gel.

[68]

10:15 – 10:30

**Martin Jakobsen**

Identification of coreceptor usage patterns during progressive HIV-1 subtype C infection that influence disease progression.

[89]

10:30 – 11:00

## Yarra Restaurant

## Morning Tea

11:00 – 13:00

## Marmion Room

### Concurrent Session 8a

### HIV – Early Stage Translation

Chair 1: Mario Stevenson

Chair 2: Jenny Anderson

11:00 – 11:15

**Marit Kramski**

HIV-1 Hyperimmune Bovine Colostrum with Broadly Neutralizing Activity against HIV-1.

[38]

11:15 – 11:30

**Sushama Telewatte**

The dendrimer SPL7013 demonstrates HIV-1 virucidal activity.

[73]

11:30 – 11:45

**Clare Westhorpe**

The HaCH Study: Markers of monocyte activation as correlates of cardiovascular disease in HIV patients.

[80]

11:45 – 12:00

**Edwin Leeansyah**

The use of real-time quantitative PCR to measure telomerase activity and telomere length in HIV-infected patients receiving combination antiretroviral therapy.

[42]

12:00 – 12:15

**Gregor Lichtfuss**

HiACT: HIV immune activation and the loss of signaling in NK cells.

[43]

12:15 – 12:30

**Michael Roche**

Dichotomous mechanisms of HIV-1 escape from the CCR5 inhibitor maraviroc by resistant virus generated in vitro and primary viruses with reduced baseline sensitivity.

[63]

12:30 – 12:45

**Sharon Lewin**

The Histone Deacetylase Inhibitors SAHA, MS-275, LBH589 and MCT3 are able to Induce HIV-1 Transcription with Differing Potencies in Chronically Infected Cell Lines and Latently Infected Primary CD4+ T-cells

[83]

12:45 – 13:00

**Ivan Stratov**

Biology of NK-mediated peptide-specific ADCC in HIV infection

[71]

11:00 – 13:00

## Yarra Room

### Concurrent Session 8b Hepatitis Clinical

Chair 1: Sharon Lewin

Chair 2: Doug Johnson

- 11:00 – 11:15 **Anna Ayres** [3]  
Lamivudine in the last trimester of pregnancy for prevention of HBV transmission: post-partum hepatic flares and development of genotypic nucleos(t)ide resistance.
- 11:15 – 11:30 **Son Truong Pham** [57]  
Frequent multiple HCV infections among injecting drug users in a prison setting.
- 11:30 – 11:45 **Scott Read** [61]  
Combination Treatment with Insulin Sensitiser and Interferon Improves Antiviral Effect against Hepatitis C Virus.
- 11:45 – 12:00 **Stephen Locarnini** [87]  
Development of an Online Genotypic Drug Resistance Testing and Monitoring Program for Chronic Hepatitis C
- 12:00 – 12:15 **Suzy Teutsch** [74]  
HCV incidence and infection outcome in a follow-up study of high-risk IDU prison inmates.
- 12:15 – 12:30 **Amanda Powell** [58]  
The Effects of Hepatitis B Infection on the Innate Immune Response During and After Pregnancy in Chronic Hepatitis B Patients
- 12:30 – 12:45 **Jacqueline Flynn** [22]  
Altered cytokine responses in HCV-infected subjects treated with interferon- $\alpha$
- 12:45 – 13:00 **Danica Martinez** [47]  
The effect of obesity on the interferon stimulated gene profile and response to antiviral therapy in chronic hepatitis C infection.

13:00 – 14:00

## Yarra Room

### Lunch

14:00 - 15:00

## Marmion Room

### Session 9 Co-infection

Chair 1: Peter Revill

Chair 2: Paul Cameron

- 14:00 – 14:15 **Alan Munn** [49]  
Mode of action, cytotoxicity, and subcellular localisation studies of a fluorescent molecule identified in a natural product library screen for inhibition of a critical HIV, HBV, and HCV host factor
- 14:15 – 14:30 **Margaret Littlejohn** [44]  
Evolution of HBV during HBV-active HAART.

<b>14:30 – 14:45</b>	<b>Barbara Cameron</b> HCV-specific immune responses during cART in individuals co-infected with HIV and HCV.	[9]
<b>14:45 – 15:00</b>	<b>Megan Crane</b> LPS, immune activation and liver disease in HIV-HBV co-infection.	[15]
<b>15:00 – 15:30</b>	<b>Awards</b>	
<b>15:30 – 15:40</b>	<b>Closing Remarks</b> <b>Tony Cunningham</b>	
<b>16:00</b>	<b>Coach departs Sebel Heritage</b>	
<b>17:30</b>	<b>Coach arrives Tullamarine Airport</b> <b>(then onto Gate 11, University of Melbourne)</b>	