

10th Annual Scientific Workshop

Mantra Lorne, Victoria

4th - 6th June 2014

Day One: Wednesday, 4th June 2014

Foyer

11:00 – 12:00 **Registration and Morning Tea**

12:00 – 13:00 **Heritage Dining Room**

Lunch

Convention Room 1

13:00 – 13:15 **Welcome**
Tony Cunningham (ACH²) and Peter White (ACHV)

13:15 – 14:00 **HIV Plenary**
Chair: Tony Cunningham
Professor Michael Emerman
Title: **Paleovirology and the ancient origins of HIV-1**

14:00 – 14:45 **Joint Session 1**

Mucosal immunity

Chairs: Cath Latham, Najla Nasr

14:00 – 14:15 **Andrew Harman** [25]

The role of mucosal dendritic cells in sexual transmission of HIV

14:15 – 14:30 **Nollaig Bourke** [62]

The role of interferon epsilon in the female reproductive tract

14:30 – 14:45 **Muriel Aldunate** [2]

Vaginal concentrations of lactic acid potentially inactivate HIV-1 compared to short chain fatty acids present during bacterial vaginosis

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|---------------|--|------|
| 14:45 – 15:15 | Foyer | |
| | Afternoon Tea | |
| | Convention Room 1 | |
| 15:15 – 17:15 | Joint Session 2 | |
| | Innate immunity | |
| | Chairs: Andrew Harman, Michael Beard | |
| 15:15 – 15:30 | Najla Nasr | [42] |
| | Mechanism of HIV induction of interferon stimulated gene in macrophages and their relative importance as restriction factors for HIV replication | |
| 15:30 – 15:45 | Karla Helbig | [28] |
| | Viperin positively augments early innate signalling pathways | |
| 15:45 – 16:00 | Ani Galoyan | [20] |
| | Mechanism of inhibition of innate immune response by HIV-1 in dendritic cells | |
| 16:00 – 16:15 | Kumar Visvanathan | [53] |
| | Differences in Toll-Like Receptor 4 expression on peripheral monocytes and NK cells in the spontaneous clearance of acute HCV infection in HIV-infected vs. HIV-uninfected individuals | |
| 16:15 – 16:30 | Rachel Botting | [10] |
| | Investigating the mechanism by which microvesicles enhance the establishment of HIV-1 Infection | |
| 16:30 – 16:45 | Auda Eltahla | [19] |
| | Effect of the hepatitis C virus polyU/UC tract on host response and disease outcome | |
| 16:45 – 18:00 | Recreation | |
| 18:00 – 19:00 | Brasserie | |
| | Pre-Dinner Drinks and Canapes | |
| 19:00 | Dinner | |

Day Two: Thursday, 6th June 2013

08:30 – 09:15

Convention Room 1

Hepatitis Plenary

Chair: Peter Revill

Professor Stephan Urban

Title: **Entry and entry inhibition of Hepatitis B and Hepatitis Delta Virus – Novel therapeutic concepts on the horizon**

09:15 – 09:30

Joint Session 3 Viral entry and vaccines

Chairs: Peter Revill, Auda Eltahla

09:15 – 09:30

Heidi Drummer

[18]

Preclinical development of a prophylactic vaccine for Hepatitis C virus using a novel E2 core domain

09:30 – 10:15

Foyer

Morning Tea

Sabine Ballroom

Morning Tea with Professor Michael Emerman

10:15 – 11:45

Convention Room 1

Concurrent Session 1 HIV latency, persistence and replication

Chairs: Melissa Churchill, Lachlan Gray

10:15 – 10:30

Kirston Barton

[7]

Disruption of HDAC3 induces HIV-1 transcription

10:30 – 10:45

Jonathan Jacobson

[31]

A dual-reporter cell line, modelling HIV-1 post integration latency, reveals the poor specificity of current epigenetic modifying drugs for proviral HIV-1 activation

10:45 – 11:00

Eunok Lee

[38]

Genetically characterizing latent HIV-1 reservoirs

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|----------------------|---|------|
| 11:00 – 11:15 | Vani Geetha Samanthi Narasimhulu | [41] |
| | Distinct roles of the membrane proximal ectodomain region (MPER) of HIV-1 gp41 in cell-free and cell-to-cell virus transmission | |
| 11:15 – 11:30 | Wen Shi Lee | [61] |
| | ADCC against cells latently infected with HIV – potential role in assisting cure of HIV | |
| 11:30 – 11:45 | Georges Khoury | [34] |
| | Targeting HIV splicing and translation in latently infected T cells: Contributing to a cure | |
| 11:45 – 12:30 | Recreation | |
| 10:15 – 12:30 | Convention Room 3 | |
| | Concurrent Session 2 | |
| | Hepatitis virus host interactions | |
| | Chairs: Kumar Visvanathan, Thomas Tu | |
| 10:15 – 10:30 | Zunaira Awan | [4] |
| | Calsyntenin-1 is involved in the hepatitis C virus life cycle | |
| 10:30 – 10:45 | Thomas Tu | [52] |
| | Microvesicles: a window into the liver | |
| 10:45 – 11:00 | Michael Beard | [9] |
| | Identification of an essential phosphorylation site in hepatitis C virus NS5A protein | |
| 11:00 – 11:15 | Jason Grebely | [21] |
| | Patterns of hepatitis C virus RNA levels during acute infection: The InC3 study | |
| 11:15 – 11:30 | Julianne Bayliss | [8] |
| | Spliced HBV genomes and truncated surface proteins are associated with ground glass hepatocytes, the neoplastic precursors to HBV associated hepatocellular carcinoma | |
| 11:30 – 11:45 | Hugh Mason | [40] |
| | Hepatitis B virus splicing; <i>in vitro</i> associations with genotype and disease | |
| 11:45 – 12:00 | Recreation | |

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| 12:00 – 13:00 | Heritage Dining Room | |
| | Lunch | |
| | Heritage Dining Room | |
| | Lunch with international guests | |
| | Boardroom 2 - Allenvale | |
| | ACH² Executive Meeting & Working Lunch | |
| 13:00 – 14:30 | Convention Room 1 | |
| | Concurrent Session 3 | |
| | Hepatitis host response | |
| | Chairs: Rosemary Ffrench, Tania Applegate | |
| 13:00 – 13:15 | Nollaig Bourke | [63] |
| | Hepatitis C Virus (HCV) genotype 1, but not genotype 3, specifically inhibits IFN- α signalling and may explain poor response to IFN- α therapy | |
| 13:15 – 13:30 | Gareth Burns | [14] |
| | Determinants of sustained virological response after discontinuation of long-term nucleoside analogue therapy in chronic hepatitis B patients | |
| 13:30 – 13:45 | Bisma Rauff | [48] |
| | The role of endocannabinoids in Hepatitis C Virus (HCV) induced fibrosis | |
| 13:45 – 14:00 | Melanie Walker | [54] |
| | Understanding nAb responses in early primary HCV infection | |
| 14:00 – 14:15 | Francois Lamoury | [35] |
| | HIV infection increases pro-inflammatory cytokines and pro-fibrogenic chemokines during recent hepatitis C virus infection | |
| 14:15 – 14:30 | Benny Baharuddin | [5] |
| | Impaired T cell glucose metabolism during chronic hepatitis C virus infection | |

13:00 – 14:15

Convention Room 3

Concurrent Session 4 HIV Vaccines

Chairs: Damian Purcell, David Harrison

13:00 – 13:15

Samantha Brandler

[11]

HIV-1 MicroCube Vaccine: Crystalline microparticles as antigen-carriers for vaccination

13:15 – 13:30

Rob Center

[16]

Targeting HIV immunogens to immune cells to enhance vaccine efficacy

13:30 – 13:45

Charani Ranasinghe

[47]

Evaluation of HIV antibody responses following novel HIV IL-13R α 2 adjuvanted and IL-4R antagonist vaccination

13:45 – 14:00

Danushka Wijesundara

[57]

Assessing the quality of CD8⁺ T cell responses *in vivo* following HIV-1 recombinant pox virus vaccination using a novel fluorescent target array assay

14:00 – 14:15

Annemarie Laumaea

[37]

Activation Mechanism of R5X4 HIV-1 Envelope glycoproteins

14:15 - 14:30

Andreas Suhrbier

[3]

EcoHIV, a convenient, biosafety level 2, mouse model for animal testing of HIV vaccines and anti-retroviral drugs.

14:30 – 14:45

Bruce Wines

[64]

Antibody Fc receptor interactions and HIV

14:45 – 15:15

Foyer

Afternoon Tea

| | | |
|----------------------|--|------|
| 15:15 – 17:00 | Convention Room 1 | |
| | Joint Session 4 | |
| | Sequencing | [17] |
| | Chairs: Andrew Lloyd, Julianne Bayliss | |
| 15:30 – 15:45 | Magdalena Budzinska | [13] |
| | Genomic evolution of hepatocytes towards hepatocellular carcinoma | |
| 15:45 – 16:00 | Caryll Waugh | [56] |
| | A general method to eliminate laboratory sources of chimeras (artificial recombinants) during massive, parallel, cDNA sequencing | |
| 16:00 – 16:15 | Berhan Ayele Haile | [23] |
| | Development and evaluation of a simple filter paper based method of plasma separation and collection for viral load testing | |
| 16:15 – 16:30 | Preston Leung | [39] |
| | Characterisation of founder virus dynamics during acute HCV infection | |
| 16:30 – 16:45 | Niamh Keane | [32] |
| | Viral adaptation in autologous viral sequences of patients with acute and early HIV infection prior to full seroconversion | |
| 16:45 – 17:00 | Lilly Yuen | [58] |
| | A next generation sequencing approach for the detection of drug resistant hepatitis B virus (HBV) in the clinical setting | |
| 17:00 – 18:00 | Convention Room 3 | |
| | ACHV Annual General Meeting | |
| 18:00 – 19:00 | Heritage Dining Room | |
| | Wine (information session) and cheese tasting | |
| 19:00 | Heritage Ballroom | |
| | Dinner | |

Day Three: Friday, 7th June 2013

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|----------------------|---|------|
| 07:30 – 08:30 | Heritage Dining Room | |
| | Breakfast | |
| 08:30 – 10:30 | Convention Room 1 | |
| | Joint Session 5 | |
| | Virus host interactions | |
| | Chairs: Gilda Tachedjian, Karla Helbig | |
| 08:30 – 08:45 | Gholamreza Haqshenas | [24] |
| | HCV and HCV/host proteins interactions as potential antiviral targets | |
| 08:45 – 09:00 | David Harrison | |
| | Contribution of a polar cluster that is associated with a highly conserved surface cavity of HIV-1 gp120 in CD4-induced activation of the gp41 prehairpin | [26] |
| 09:00 – 09:15 | Mosleh Abomughaid | [1] |
| | Lipidomic analysis of HCV infected hepatocytes: Increased phosphatidylcholine production via PEMT pathway enhances viral replication and inhibits interferon signalling | |
| 09:15 – 09:30 | Mark Douglas | [59] |
| | The role of exportin-1 in facilitating HCV IRES mediated translation | |
| 09:30 – 09:45 | Johnson Mak | [46] |
| | CD4 receptor-engagement induces structural rearrangement of HIV | |
| 09:45 – 10:00 | Bang Manh Tran | [51] |
| | The Hepatitis B Surface proteins may promote the development of liver cancer via upregulation of Wnt/ β -catenin signalling | |
| 10:00 – 10:45 | Foyer | |
| | Morning Tea | |

10:45 – 12:00

Convention Room 1

Concurrent Session 6 HIV drugs and treatment

Chairs: Andy Pombourious, Michael Roche

10:45 – 11:00

Alison Castley

[15]

Monitoring HIV-1 drug resistance mutations among newly diagnosed Western Australian HIV patients

10:45 – 11:00

Rebecca Pavlos

[45]

Mechanistic basis of Antiretroviral HLA - Associated drug hypersensitivities

11:00 – 11:15

Sushama Telwatte

[50]

Silent mutations in HIV-1 subtype B reverse transcriptase selected by antiretroviral therapy restore viral fitness by reducing indel mutation frequency during reverse transcription

11:15 – 11:30

Catherine Latham

[36]

New drugs for HIV-1 prevention: fragment inhibitors of HIV-1 reverse transcriptase

11:30 – 11:45

Clovis Palmer

[43]

Development of an electronic interface device to measure glycolytic metabolism of activated CD4+ T cells

11:45 – 12:00

Recreation

10:30 – 12:00

Convention Room 3

Concurrent Session 7

Hepatitis genomics and epidemiology

Chairs: Margaret Littlejohn, Gareth Burns

10:30 – 10:45

Sofia Bartlett

[6]

Transmission dynamics of acute hepatitis C virus infection in Australia

10:45 – 11:00

Jason Grebely

[22]

Phylogenetic clustering of hepatitis C virus and factors associated among people who inject drugs in Vancouver, Canada

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|----------------------|--|------|
| 11:00 – 11:15 | Kathy Jackson | [30] |
| | Molecular epidemiology of hepatitis delta virus in the western pacific region | |
| 11:15 – 11:30 | Neil Bretaña | [12] |
| | An individual-based model for HCV transmission dynamics among PWID in NSW prisons | |
| 11:30 – 11:45 | Jacinta A Holmes | [29] |
| | The association between <i>IFNL4</i> genotype, intrahepatic ISG expression and response to peginterferon plus ribavirin therapy differs according to HCV-genotype of infection | |
| 11:45 – 12:00 | Suong Le | [60] |
| | CXCL-8 predicts HBeAg seroconversion and post treatment flares in chronic hepatitis B (CHB) patients treated with interferon (IFN)-alfa | |
| 12:00 – 13:00 | Heritage Dining Room | |
| | Lunch | |
| 13:00 – 14:00 | Convention Room 1 | |
| | Joint Session 6 | |
| | Highlights | |
| | Chairs: Mark Douglas, Rob Centre | |
| 13:00 – 13:15 | Peter Revill | [49] |
| | Genotype-mediated variability in HBV replication and natural history | |
| 13:15 – 13:30 | Stephen Kent | [33] |
| | Defending against cell-associated HIV transmission: role for NK cells and ADCC antibodies in recognizing and clearing foreign infected cells | |
| 13:30 – 13:45 | Clovis Palmer | [44] |
| | High glycolytic activity of CD4+ T during HIV infection is associated with non-immunological response to antiretroviral therapy | |
| 13:45 – 14:00 | Joshua Hayward | [27] |
| | Identification of diverse full-length endogenous betaretroviruses in megabats and microbats | |

Convention Room 1

14:00 – 14:30

Awards Presentation

14:30 – 14:45

Closing Remarks

Tony Cunningham

Foyer

Collect boxed afternoon tea

15:00

**Coaches depart for Melbourne Airport and Gate 11,
University of Melbourne**