



**UNSW**  
AUSTRALIA

Never Stand Still

Medicine

The Kirby Institute



**Kirby Institute**

ANNUAL REPORT 2012



THE KIRBY INSTITUTE  
for infection and immunity in society

ANNUAL REPORT 2012

## CONTENTS

Kirby Institute programs 2012	3
Research activities:	
Aboriginal and Torres Strait Islander Health Program	10
Biostatistics and Databases Program	11
HIV Epidemiology and Prevention Program	13
Immunovirology and Pathogenesis Program	15
Justice Health Research Program	19
Public Health Interventions Research Group	20
Sexual Health Program	25
Surveillance and Evaluation Program	30
Therapeutic and Vaccine Research Program	32
Viral Hepatitis Clinical Research Program	36
Viral Hepatitis Epidemiology and Prevention Program	40
Kirby Institute advisory committees	45
External boards, committees and advisory groups	47
Staff and affiliated researchers	51
Students and student supervision	54
Collaborating organisations	57
Funding and research grants	63
Publications	66

## THE ABORIGINAL AND TORRES STRAIT ISLANDER HEALTH PROGRAM

The Aboriginal and Torres Strait Islander Health Program was established in 2007. The program works collaboratively to close the gap in health between Aboriginal and Torres Strait Islander and non-Indigenous people, with a central focus upon sexual health and blood borne viruses. In doing so, the program engages in strategies that are designed to enhance the capacity of Aboriginal and Torres Strait Islander communities in health improvement.

The program has four main domains of activity that it conducts in partnership within Aboriginal and Torres Strait Islander communities:

- Research aimed at increasing knowledge about ways to prevent and manage blood-borne viral and sexually transmissible infections in Aboriginal and Torres Strait Islander communities;
- Surveillance to support programs and policy related to the control of these infections in Aboriginal and Torres Strait Islander communities;
- Capacity building, to ensure that there is a strong workforce in research and service delivery in Aboriginal and Torres Strait Islander communities;
- Information dissemination to and from Aboriginal and Torres Strait Islander communities about key new developments and best practice in the control of blood-borne and sexually transmitted infections.

The program works closely with the National Aboriginal Community Controlled Health Organisation, its State and Territory-based affiliate organisations and Aboriginal Community Controlled Health Services to make a difference to the health of indigenous communities.

James Ward, who founded the program, moved to a senior position in Alice Springs with Baker IDI but has maintained strong collaboration with the program and ongoing leadership of a number of its projects. The program published the annual surveillance report on blood-borne viral and sexually transmitted infections in Aboriginal and Torres Strait Islander people, which is designed to provide a comprehensive update to meet the planning and evaluation needs of communities. Australia's largest randomised cluster trial ever conducted in Aboriginal health, named STRIVE and funded by the NHMRC, completed its first year of activity and transitioned into the second year, undertaking quality improvement for sexual health clinical services in nearly 70 remote communities across central and northern Australia. Work progressed through 2012

in SHIMMER, a quality improvement project in Aboriginal Community Controlled Health Services in NSW with State government support. REACCH, a Centre for Clinical Research Excellence in Aboriginal Community Controlled Health taking place at four community controlled services across the country, collected comprehensive data on uptake and outcome of testing for sexually transmissible infections and hepatitis B. The ARC-funded project GOANNA, the first national survey of young Aboriginal and Torres Strait Islander people regarding sexual and injecting related knowledge, risk behaviour and health service access, completed its second full year of data collection, through a variety of community events across the country. Ongoing projects in which the program played a major role in 2012 were NHMRC-funded studies of point-of-care testing for sexually transmissible infections in remote communities (TTANGO) and a large cluster randomised trial of chlamydia screening (ACCEPT).

## THE BIOSTATISTICS AND DATABASES PROGRAM

The Biostatistics and Databases Program has a collaborative biostatistical research role across many of the Kirby Institute's programs and activities. A key activity in this area in 2012 was extensive statistical analyses of the ENCORE and SECONDLINE clinical trials (TVRP), for DSMB activities and final reporting. The final statistical analyses of the PREDICT study (HIVNAT) were conducted and published. Study databases were developed for trachoma surveillance (SEPHH) and the REACT study (SHP). The program also started a new role to provide training for, and coordination of, NHMRC and ARC grant applications.

During 2012 groundwork was laid for the development of a number of new collaborative studies. A case-control study of TB diagnosis in HIV-positive adults in Asia, examining socio-economic risk factors for infection, was commenced. A case-control study of risk factors for suicide in HIV-positive adults in Australia was also begun. A trial of scabies treatment in Fiji was initiated. Finally, the extensive approvals required for a linkage study of the Health in Men and Positive Health studies with the National Death Index and hospitalisation databases was put in place. All these studies are expected to provide exciting research outputs in 2013 and beyond.

2012 was an active year for research outputs in a number of areas. Methodological work included an adaptive Markov chain Monte Carlo for epidemic modelling of HPV; the use of semiparametric regression models in HIV prevention research; and reclassification metrics to evaluate survival prediction

equations in HIV-positive patients. Analyses of observational cohort data showed that in HIV-positive adults successfully treated with antiretrovirals, life expectancy approached that of the general population, and that long-term CD4 count responses showed no evidence of declining in older patients. A diabetes risk prediction model was also developed for HIV-positive patients that should aid identification and patient management of pre-diabetes. Predictors of lost to follow-up were examined in HIV-positive patients receiving treatment in Asia, and found the optimal definition of lost to follow-up was no clinical contact for 180 days. Advanced statistical analysis of HIV surveillance data indicated a reduced impact of antiretroviral treatment among injecting drug users. Finally, hepatitis C treatment outcomes in routine care in Australian clinics were evaluated.

**Professor Matthew Law**, head of the Biostatistics Program, has been at the Kirby Institute for almost twenty years. His group plays a key support role to other academic programs but has also independent research activities in cohort studies, mathematical modelling, linkage studies and complex statistical analyses.

## THE HIV EPIDEMIOLOGY AND PREVENTION PROGRAM

The HIV Epidemiology and Prevention Program (HEPP) conducts research into the transmission and prevention of HIV and sexually transmissible infections (STIs), and on the natural history of HIV. We work in partnership with communities most affected by HIV, particularly the gay community and those people living with HIV. HEPP works across the spectrum of biomedical, behavioural and structural prevention, because effective HIV prevention acknowledges the complexities of everyday life for at-risk communities. Their work includes behavioural risk surveillance, studies of risk behaviour, and studies of use of biomedical preventive interventions. Researchers in HEPP conduct a range of work on the intersection of infection, immunity and cancer to inform our knowledge of how we might prevent cancer in people with HIV. A particular focus is the prevention of anal cancer in gay men.

Highlights of 2012 for the HIV Epidemiology and Prevention Program include the commencement of enrolment into the NHMRC funded Opposites Attract project. Opposites Attract is a five year cohort study of HIV transmission in HIV serodiscordant gay couples. The study is examining the effect of HIV treatment and HIV viral load on sexual risk behaviour and the rate of HIV transmission. Data from the study will be critical in informing the development of biomedical HIV prevention policies in Australia. Complementing Opposites Attract is the TAXI-KAB study which is collecting baseline information about gay men's knowledge, attitudes and beliefs about recent changes in biomedical prevention of HIV and in HIV testing procedures and technologies. These data will be key to assessing any changes in understanding of these issues over coming years. The first three year funding period of the national HIV Seroconversion Study was completed in June, with nearly 500 recently diagnosed individuals having been enrolled into the study. The study report was launched in Melbourne at the annual ASHM conference. The next funding period will commence at the start of 2013. Recruitment for the NHMRC-funded Study of the Prevention of Anal Cancer neared completion, and baseline data were presented at the 28th International Papillomavirus Conference in Puerto Rico.

**Professor Andrew Grulich** heads the HIV Epidemiology and Prevention Program with a focus on cohort studies in at risk populations linked to behavioural and biomedical prevention of HIV and sexually transmitted infections. These types of research are central to the evaluation of biomedical preventions strategies such as vaccines, microbicides and chemoprophylaxis. Professor Grulich is also a world authority on the serious emerging issue of cancer in HIV. Andrew has been at the Kirby Institute for 20 years.

## THE IMMUNOVIROLOGY AND PATHOGENESIS PROGRAM

The activities of the IVPP during 2012 can be divided into three categories. All involve substantial, daily interaction with the Immunovirology group at St Vincent's Centre for Applied Medical Research, which is collocated with IVPP.

A substantial proportion of laboratory-based activity involved provision of routine or semi-routine laboratory support, essential for the successful conduct of clinical trials and epidemiological studies conducted by the Kirby Institute. This section of the laboratory continued to perform well in external QA programs. The laboratory acted as the central global laboratory for flagship Kirby Institute studies such as SECOND-LINE, ENCORE, MARCH, and ATAHIC II. Collaborative strategies were further developed to streamline the conduct of the laboratory aspects of these large complex trials. The laboratory completed extensive optimisation and verification studies of DNA-based viral tropism assay which was then successfully transferred to the NSW State HIV Reference Laboratory at St Vincent's. The laboratory played a substantial role in the development of an external QA program for viral tropism that was used to qualify laboratories both in Australia and overseas for conduct of assays for the MARCH Study. The laboratory also completed all the central resistance and viral load testing for the SECOND-LINE study and has commenced performing similar assays for ENCORE.

The second critical component of the program was the continued conduct of clinical trials and natural history studies in pathogenically informative populations of patients with HIV-infection such as those with primary infection and long term non-progressors. These cohorts continued to provide valuable material for productive collaborations particularly with Stephen Kent's group at the University of Melbourne and Martyn French's group at Royal Perth Hospital. Further, the primary infection database continued to provide data to the European collaborative effort CASCADE. Each of these collaborations resulted in several peer reviewed publications in 2012. In addition, these cohorts were used for a range of studies conducted within the program including studies providing insight into new regulatory pathways of T-cell function involving micro-RNAs which in turn appear to impact on rates of progression of HIV-infection. This work was accepted for publication during 2012 and attracted editorial commentary in the *European Journal of Immunology*.

Senior scientists and academics within the program were responsible for their own research projects on pathogenesis and development of therapeutics. In 2012, a paper demonstrating the utility of a patented, simple T cell assay as assisting the diagnosis of latent TB was published. These results were derived from twin studies conducted in Sydney and Bangkok, in collaboration with HIV-NAT. In addition, the initial analyses

of the first year of the PINT study, which provided new insights into dynamics of establishment and maintenance of the viral reservoir, were published in two separate manuscripts. Samples from this trial were a major focus of on going work in the laboratory in 2012. Further, insights into the mechanisms underlying the maintenance of the viral reservoir were sought from the elucidation of the relative infection rates of various T-cell subsets and their turnover rates. Developmental work for the characterisation of viral DNA load and phylogenetic profiles of virus-infected, antigen-specific CD4+ T-cells was carried out. This sophisticated work is only possible using a combination of molecular and cellular assays developed within the laboratory. These and other studies involving identification of lymphocyte subsets were aided by an upgrade of our flow cytometer to a 3 laser machine capable of analysing 15 parameters simultaneously. This was achieved through the award of an equipment grant, allowing a machine purchased in 2003 to remain state of the art.

During 2012 the first in vivo testing of our unique siRNAs that induce prolonged transcriptional gene silencing of HIV-1 in a Hu-SCID mouse model were completed with our Japanese collaborators. These experiments provided very encouraging data regarding the ability of these constructs to suppress viral replication when delivered by retroviral constructs. Further, the results of elegant molecular and confocal microscopy demonstrating that these constructs work in the nucleus in concert with Ago1 were published. The proposed development of these constructs was supported through the award of an NHMRC project grant to commence in 2013.

In 2012 Dr Stuart Turville and his HIV Biology Group had their work on the visualisation of the mechanisms of viral interaction with filopodia on dendritic cells and how this allows increased infection of CD4+ T cells was published in *Plos Pathogens*. The further development of this work was supported by the NHMRC with the funding of a project grant lead by Stuart to commence in 2013. Stuart was also successful in attracting funding for the upgrading of the DeltaVision Elite microscope housed within the St Vincent's AMR PC3 laboratory. This upgrade, which will occur early in 2013, will allow high through-put, and high resolution imaging of the interactions between virus and sub-cellular compartments in live cells in real time.

At the end of 2012, the laboratory took delivery of sophisticated confocal endo-microscope from Optiscan. It will be used with collaborators at the Garvan Institute of Medical Research and St Vincent's Hospital to visualise dynamic changes in the integrity of mucosal surfaces and for the monitoring real time of mucosal immune responses in vivo.

The overall quality of the work generated by the program and its ability to collaborate effectively to produce high quality clinically important results was recognised through the awarding of a highly prestigious NHMRC program grant to commence in 2014 through to a group of investigators, including the head of the IVPP.

**Professor Tony Kelleher** is head of the Immunovirology and Pathogenesis Program, and works closely at a laboratory level with colleagues from SVH. The program provides lab support across the organisation, as well as conducting world-class research, presently focussed on the design and development of novel assays, and the study of micro RNAs, fine mapping of T-cell function, and the transcriptional gene silencing of HIV by siRNA.

#### **Dr Stuart Turville**

Dr Turville's research career started with a BSc Hons (First class and John Elliot Prize for Best Thesis in Animal Biology) and followed with an Australian Postgraduate Award for PhD studies at the University of Sydney on the mechanism of HIV transmission in dendritic cells.

## **JUSTICE HEALTH RESEARCH PROGRAM**

The Justice Health Research Program was established at the Kirby Institute in January 2011. Designed to complement the KI approach to health and human rights, particularly among marginalised populations, the program has a particular focus on Australia's offender population. The Justice Health Research Program undertakes research into a broad range of health issues affecting offender populations including communicable diseases, access to hepatitis C treatment in prison, Aboriginal health, mental health, sexual health, tobacco smoking, impulsivity, and alcohol use.

2012 saw the Justice Health Research program grow in terms of projects and staff joining the team. The program received NHMRC funding to look at the sexual health, attitudes to sex and reproductive health of young offenders in the community and custody (the JOSH study). The JOSH study complements the highly productive Sexual Health and Attitudes of Australian Prisoners (SHAAP) survey of adult offenders. Funding was received in 2012 from the Lowitja Institute to examine the community's attitudes to the treatment of offenders using a Citizen's Juries approach pioneered by the late Professor Gavin Mooney.

The program continues to hosts the NHMRC capacity building grant in Indigenous offender health, which has a cohort of Aboriginal researchers across Australia examining a range of issues including justice reinvestment, alcohol programs for Aboriginal men in custody, youth trajectories into crime, the health needs of Aboriginal prisoners, and the role of social support and families in post-release integration. Paul Simpson joined the team as the Indigenous Offender Health Capacity Building Group (IOHR-CBG) coordinator, and has also commenced working on collaborative projects looking at justice reinvestment and transgender prisoner policies.

Other NHMRC funded projects that continued during 2012 included the Hepatitis C, Prisons and Treatment Opportunities (HePATO)' study, and the AusAID funded study 'Strengthening China's response to HIV, TB and HIV/TB co-infection in labour camps (*lao jiao suo*) in Guangxi Autonomous Region: developing a prevention model to inform national policy'.

Joanne Reekie also joined the program working on a range of projects as support statistician.

**Professor Tony Butler** is the inaugural head of the Justice Health Research Program. He has researched health issues in the criminal justice system for more than a decade. Professor Butler's research focus includes the surveillance of blood-borne viruses and sexually transmissible infection among prison entrants nationally, work on establishing the National Prisoner Health Indicator Project, conducting Australia's largest epidemiological survey of prisoners' mental health and research into traumatic brain injury among prisoners. He is a key member of a group undertaking research into smoking cessation among prisoners.

## THE PUBLIC HEALTH INTERVENTIONS RESEARCH GROUP

The Public Health Interventions Research Group (PHIRG) undertakes a diverse range of projects that focus on the evaluation of strategies to prevent infectious disease. The program collaborates extensively, both within the Kirby Institute and externally, and emphasises research that benefits the health of disadvantaged populations in Australia and the Asia-Pacific Region. Much of their work also has a strong capacity-building component. The group is currently involved in projects related to the control of HIV, sexually transmissible infections, viral hepatitis, tuberculosis, scabies and trachoma. Countries of activity include Australia, Papua New Guinea, Indonesia, Cambodia and Fiji.

In 2012, Bette Liu undertook and published a linkage study that demonstrated a strong downward trend in chronic hepatitis B infection among pregnant women in the Northern Territory, where the neonatal vaccination program was commenced more than twenty years ago. The program also completed the largest study ever undertaken of hepatitis B infection in New South Wales by country of birth. Also completed, as part of a collaboration with the Royal Women's Hospital in Melbourne, was the first survey in the world to demonstrate a decline in human papillomavirus infection following the implementation of the national vaccination program. In conjunction with the other Kirby Institute programs, PHIRG continued work on national trachoma surveillance and; its second annual surveillance report from was also released. Andrew Vallely, on secondment to the Papua New Guinea Institute of Medical Research, continued to build the research program on male circumcision in Papua New Guinea and its link to sexual health, culminating in several published reports. He also embarked on new projects in sexually transmitted infection and the control of human papillomavirus and its complications. The project, evaluating interferon gamma release assay for diagnosis of children with suspected tuberculosis in PNG, was published in 2012. Through a successful competitive application, AusAID provided renewed funding for the Field Research Training Program (FRTP) in Indonesia and Cambodia, which is designed to assist emerging public health researchers to develop skills and experience in longitudinal health studies. Bradley Mathers was awarded a NHMRC early career fellowship, to commence in 2013.

**Professor John Kaldor** is an NHMRC Senior Principal Research Fellow and Professor of Epidemiology.

## THE SEXUAL HEALTH PROGRAM

The Sexual Health Program leads and supports research into the epidemiology, surveillance, microbiology, clinical management and prevention of sexually transmissible infections (STIs). The program is also involved in research into the behaviour and sexual health of priority populations for STI control such as youth, men who have sex with men (MSM), sex workers, Aboriginal and Torres Strait Islander people, prisoners and travellers.

The program works closely with several programs within the Kirby Institute. Other collaborators include: a national network of 25 specialist sexual health services; research laboratories in Sydney, Melbourne, Brisbane and Papua New Guinea; the School of Population Health at the University of Melbourne; the Burnet Institute in Melbourne; the National Aboriginal Community Controlled Health Organisation; BakerIDI in Alice Springs; and the Menzies School of Health Research in Darwin.

This was another busy and productive year. In 2012 several new joint projects were developed with the Sydney Sexual Health Centre. Methodologies used by the program range from descriptive epidemiology with novel analytical techniques, molecular epidemiology, enhanced surveillance strategies, data linkage studies, social and behavioural research, test evaluations, detecting antimicrobial resistance, evaluating and improving health care delivery, legal and policy research, anthropology, and biomedical prevention trials.

In March, the program launched a report called *The Sex Industry in New South Wales*, commissioned by the NSW Ministry of Health. The report favourably evaluated the long-term impact of the decriminalisation of sex work and made recommendations to inform future policy development.

In conjunction with the Burnet Institute, the Sexual Health Program continues to steer the Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance (ACCESS), which uses routine clinical data to complement routine notification data and evaluate clinical service strategies. Over 100 clinical sites participate in ACCESS, each providing a core set of routinely collected data in de-identified line-record format which are extracted on a six-monthly basis. The ACCESS network provided the first reliable means of interpreting trends in national rates of chlamydia diagnoses. Plans are well advanced to expand the range of STIs and risk behaviours captured by ACCESS. In addition, the program's national genital warts surveillance system documented a dramatic population-level reduction in warts as a result of the national HPV vaccination program.

The Sexual Health Program also continued its involvement in the Australian Chlamydia Control Effectiveness Pilot (ACCEPt), led by Associate Professor Jane Hocking at the University of Melbourne. ACCEPt is the first study to assess the population impact of annual chlamydia screening in primary care on the prevalence of chlamydia using a randomised controlled study design.

Continuing the program's commitment to innovative research aimed at improving testing for STIs, the chlamydia re-test trial (REACT), funded by the NHMRC STI Program Grant, uses a randomised controlled design to assess the effectiveness of coupling SMS reminders with home-based self-collected samples in improving the uptake of chlamydia re-testing. Regular testing and re-testing for HIV and other STIs in high risk populations is recognised as a key control strategy. NSW Health has funded the eTEST intervention which is designed to increase the frequency of HIV/STI screening in 'high risk' MSM through a novel multi-faceted intervention using decision support software coupled with other evidence-based strategies. This project involves 10-12 general practice clinics in Sydney and Melbourne that see a high case load of MSM.

Rebecca Guy leads the NHMRC-funded Test, Treat and Go (TTANGO) Project: a trial of a novel nucleic acid amplification point-of-care test for chlamydia and gonorrhoea (GeneXpert®). The trial uses a cross-over, cluster-randomised design in 12 remote Aboriginal communities in northern Queensland, Western Australia and South Australia. During 2012, the laboratory evaluation of the testing system was successfully completed and field evaluations began. The Sexual Health Program was also involved in the multi-centre (Sydney, Melbourne and Goroka) laboratory-based evaluation of six rapid point-of-care tests for syphilis.

The program continued to provide clinical and technical support to several large trials of sexual health care quality improvement in Aboriginal medical services, including the STRIVE Project (WA, NT, and Qld), the NHMRC Centre for Clinical Research Excellence in Aboriginal sexual health (NSW, SA, Qld, and Vic), and the SHIMMER Project (NSW).

The program had a strong presence at the IUSTI World STI & HIV Congress in Melbourne in October with 18 presentations. Program staff also accepted invitations to present their research in Brazil, Canada, Turkey, the UK and Chile.

## THE SURVEILLANCE AND EVALUATION PROGRAM FOR PUBLIC HEALTH

The Surveillance and Evaluation Program for Public Health (SEPPH) monitors the pattern of transmission of HIV, viral hepatitis, specific sexually transmissible infections, transfusion transmissible infections, and trachoma in Australia. The program assesses past and expected epidemic trends, and evaluates the epidemiological impact and cost-effectiveness of public health intervention strategies through various trial designs and retrospective analyses. SEPPH also conducts efficiency studies of HIV programs and informs national strategic planning, including optimal resource allocation and financing with primary focus in Asia and Eastern Europe.

Blood-borne viral and sexually transmissible infections (STIs) surveillance activities are conducted in collaboration with the Australian Commonwealth Government Department of Health and Ageing, State and Territory health authorities and collaborating networks. Analyses and interpretation of recent trends in new diagnoses of HIV, viral hepatitis and STIs, and estimates of prevalence and incidence in key population subgroups are published in our Annual Surveillance Report. Publicly released datasets on new HIV and AIDS diagnoses are also available for download. SEPPH, is a collaborating unit of the Australian Institute of Health and Welfare. The program collaborates with the Australian Red Cross to conduct surveillance of transfusion transmissible infections among blood donors in Australia. In collaboration with the Office of Aboriginal and Torres Strait Islander Health of the Department of Health and Ageing and other Kirby Institute Programs, SEPPH coordinates national surveillance and reporting of trachoma among Aboriginal communities.

In 2012, SEPPH released a number of Surveillance Reports, including the sixteenth annual review of available surveillance data pertaining to the occurrence of 'HIV, viral hepatitis and sexually transmissible infections in Australia', and the sixth annual 'Blood-borne viral and sexually transmitted infections in Aboriginal and Torres Strait Islander people: Surveillance and Evaluation Report'. Surveillance activities and analyses of transfusion transmissible infections in Australia were once again conducted, which led to the second-annual 'Transfusion Transmissible Infections in Australia Surveillance Report'. Cross-program contributions resulted in advancement of the National Trachoma Surveillance and Reporting Unit at UNSW and the production of the second UNSW trachoma report 'Australian Trachoma Surveillance Report 2011', due for publication in 2013. Further cross-program collaboration resulted in the release of the National BBV and STI Surveillance and Monitoring Plan which will be followed by SEPPH in the production of an annual report for monitoring progress against the latest blood-borne viral and STI national strategies.

SEPPH advanced its international expertise, working in collaboration with the World Bank Group, to commence a project to contribute to the improvement of the effectiveness and efficiency of HIV prevention responses in Asia's concentrated HIV epidemic settings. Extensions of this work involve studies around evaluation, health economics, efficiency and financing for informing Ministries of Health and Ministries of Finance in many countries. SEPPH currently conducts analyses in: Malaysia, Myanmar, Nepal, Thailand, China, Philippines, Cambodia, Indonesia, Vietnam, Jamaica, Malawi, Nigeria, Swaziland, Zimbabwe, Ukraine, Moldova, Armenia, Belarus, Tajikistan, Estonia, Georgia, Kazakhstan, and Russia.

Associate Professor David Wilson, head of the Surveillance and Epidemiology Program for Public Health, has presided over a restructure and expansion of our surveillance work in the few short years since he joined the Kirby Institute. His program has extended its standing monitoring of HIV, viral hepatitis, and specific sexually transmissible infections to other surveillance activities as well as to the assessment of past and expected epidemic trends, and more recently to impact evaluation, cost-effectiveness and efficiency studies of HIV programs.

## THE THERAPEUTIC AND VACCINE RESEARCH PROGRAM

The Therapeutic and Vaccine Research Program (TVRP) conducts a range of clinical trials designed to assess the effectiveness of new HIV therapies and therapeutic strategies. These studies provide data that have an impact on policy and clinical practice, in both resource-rich and resource-limited settings. The TVRP provides leadership through the program's role as an international co-ordinating centre for the INSIGHT network, a major international collaboration for the conduct of large clinical endpoint strategic trials in HIV disease which has more than 300 sites in 30 countries. In parallel, the TVRP co-ordinates the activities and operations of an international network in over 20 countries on seven continents in which investigator-initiated research is performed.

### *Investigator-initiated research*

The SECOND-LINE study completed enrolment in September 2011 and 48 week follow-up concluded in September 2012. This clinical trial was designed to compare the safety and efficacy of ritonavir-boosted lopinavir (r/LPV) + 2-3N(t)RTI with r/LPV + raltegravir in participants virologically failing first-line therapy. Preliminary results were presented at CROI 2013. The experimental regimen was non-inferior to the standard of care regimen. Follow-up of the cohort with additional and ongoing analyses will further illuminate the care of people who have failed first line therapy.

The ENCORE1 study commenced recruitment in 2011, with all sites opening for recruitment in the period between August and December. A total of 636 patients were randomised in a period of approximately nine months. Results from the first 48 weeks of this study will be available in mid-2013.

The MARCH study continued to recruit during 2012 through a network of 63 clinical centres. The first patients were randomised in September 2011. Results of the QA/QC program have been accepted for publication and recruitment will be completed in August 2013.

### *INSIGHT research*

The START study has now recruited close to 4000 subjects with final participants to be recruited by December 2013 based on a re-estimation of sample size to 4600. This large study with seven nested substudies addresses the question of when to start antiretroviral therapy based on CD4+ cell count. The TVRP co-ordinates this trial at more than 40 centres in nine countries. The estimated completion date for the trial is 2016.

The FLU studies (002, 003 and 004) have continued to recruit patients with, initially, pandemic H5N1 swine variant influenza, but more recently with all seasonal influenza-like illnesses. The TVRP coordinates these studies in six countries that have recruited approximately 2000 subjects.

**Professor Sean Emery** is head of the Therapeutic and Vaccine Research Program. He has been at The Kirby Institute for 20 years and is a recognised expert in HIV therapeutic research and the design, conduct and reporting of clinical trials. He is a recognised leader in clinical trial research providing expert advice to UK NHS/MRC, US NIH, NSW Cancer Institute and NHMRC.

## **THE VIRAL HEPATITIS CLINICAL RESEARCH PROGRAM**

HCV therapeutic development continued in 2012 with the first phase III interferon-free trials with new direct-acting antiviral (DAA) agents for the treatment of chronic hepatitis C infection commencing. The rapidly changing HCV therapeutic landscape should provide considerable opportunity for phase IV clinical trials over the next two-to-five years, particularly in specific sub-populations and indications not addressed in phase II/III development. The Viral Hepatitis Clinical Research Program, was established in 2003 and continues to demonstrate national and international leadership in HCV research, particularly in key affected communities such as people who inject drugs and HIV coinfecting populations.

The program has three main areas. Clinical research including clinical trials forms the main part of the program's work. The second component is molecular virology and host genetic research utilising samples from HepBank, the program's viral hepatitis sample repository. The third component is epidemiological research through data linkage studies and mathematical modelling.

In addition to chronic HCV research, the program, also has interest in the natural history of newly acquired HCV and treatment of acute and chronic HCV, particularly in the setting of injecting drug use and a strong interest in HIV/HBV coinfection. The program's laboratory research focuses on superinfection / mixed infection, protective immunity, host genetics, phylogenetics and transmission dynamics and the incidence and prevalence of viral mutations that impart resistance to the new therapies. The Viral Hepatitis Clinical Research Program liaises with all other programs within the Kirby Institute, as well as with hepatologists, infectious disease physicians and primary care networks nationwide. The ACTIVATE study, which is evaluating the safety and efficacy of individualised treatment with pegylated interferon and ribavirin, commenced recruitment through a newly established international network.

Several new projects commenced or were funded in 2012. VHRC was awarded funding from Janssen to conduct DARE-C, a study evaluating the feasibility of response guided triple therapy of telaprevir, pegylated interferon 2b and ribavirin in recently acquired genotype 1 infection. The ATAHRC Recall study, which aims to examine the long term outcomes of participants enrolled in the original Australian Trial in Acute Hepatitis C study (NIH funded 2004-2009), commenced at three Australian sites. The ETHOS study completed recruitment with a total of 440 subjects enrolled from nine opiate substitution clinics and primary care clinics in NSW. The ACTIVATE study, a clinical trial of response guided treatment for chronic hepatitis C genotype 2/3 infection in current injection drug users, commenced recruitment in Canada and Australia. The study will also enrol patients through sites in five European countries and 2012 was focussed on obtaining ethical and regulatory approval in these countries.

In 2012 Professor Greg Dore was elected to the NHMRC Council and was also awarded a five-year NHMRC Program Grant. Dr Gail Matthews was awarded a four-year NHMRC Career Development Fellowship.

**Professor Greg Dore** heads the Viral Hepatitis Clinical Research Program which investigates therapeutic strategies for people infected with hepatitis B or C and particularly those for acute and chronic hepatitis C among people who inject drugs. He has been at the Kirby Institute for more than 18 years.

## **THE VIRAL HEPATITIS EPIDEMIOLOGY AND PREVENTION PROGRAM**

The Viral Hepatitis Epidemiology and Prevention Program (VHEPP) aims to conduct rigorous research that is ethical, innovative and makes a difference. The program is committed to working in partnership with affected communities in Australia and internationally to achieve key goals. Program objectives are to:

- Conduct epidemiological, social and behavioural research examining viral hepatitis and other infections in vulnerable populations, including people who inject drugs (PWID) and female sex workers (FSW)
- Develop and trial interventions designed to prevent infectious diseases in vulnerable populations
- Initiate and support surveillance activities including monitoring trends in anti-HIV and anti-HCV prevalence and risk behaviour among PWID
- Translate research outcomes into public health policy and practice
- Build capacity for research, surveillance and harm reduction within Australia and the region through the provision of training and technical assistance.

Highlights of 2012 included completion of the first-ever trial of a brief intervention designed to increase clinical trial literacy and willingness to participate in future candidate hepatitis C vaccine trials among people PWID. Conducted as part of the NHMRC-funded program of HCV vaccine preparedness studies, early results indicate an improvement in clinical trial literacy, with a significant increase in the mean number of correct responses 24 weeks post-intervention. Other VHEPP projects completed in 2012 included the Young Women's Health Study, a collaboration between UCSF, the Kirby Institute, NCHADS and the Cambodian Women's Development Association; and a cluster randomised trial of non-pharmaceutical protection against influenza in Vietnam in collaboration with the School of Public Health and Community Medicine at UNSW.



In 2012 a new NIH subcontract for the Cambodia Integrated HIV and Drug Prevention Implementation Program. Using a randomised cluster trial, this study will examine the impact of conditional cash transfer and microfinance interventions on HIV risk and ATS use among FSWs in ten provinces in Cambodia. Other new projects included an NIH-funded collaboration with the British Columbia Centre for Excellence in HIV/AIDS to evaluate the impact of social, structural and environmental factors on HIV risk, incidence and treatment outcomes among PWID and FSW. Also in 2012, VHEPP NHMRC post-doctoral fellow Jo Kimber, and Lisa Maher received funding from the Centre for Research Excellence into Injecting Drug Use (CREIDU) to conduct a ten year mortality follow-up of the HCV cohort using linkage to the National Death Index to determine causes of death and mortality risk factors in this group. Recruitment and follow-up for the Hepatitis Incidence and Transmission Study – community (HITS-c) also continued during 2012 with more than 180 anti-HCV negative PWID enrolled and 25 incident cases observed to date (8.45/100 person years).

Among the 53 papers published (and in press) by VHEPP staff and students in 2012 were the first published report of the epidemiology of human papillomavirus infection among young FSWs in Cambodia in *BMC Infectious Diseases*, a paper by Anna Olsen examining the health beliefs and behaviours of women living with hepatitis C in the *International Journal of Drug Policy*, a report by Bethany White in the *Australian and New Zealand Journal of Public Health* on the epidemiology of hepatitis B virus in PWID, and a study by Ju Park examining factors influencing willingness to participate in candidate HCV vaccine trials among PWID in *Drug and Alcohol Dependence*. Also in 2012, Lisa Maher and Nick Walsh co-edited a special issue of *Current Opinion in HIV and AIDS* on injecting drug use and HIV, and Rachael Green (National Drug Research Institute co-supervision) was awarded a PhD for her thesis *An ethnographic study of recreational drug use and identity management among a network of electronic dance music enthusiasts in Perth, Western Australia*.

**Professor Lisa Maher** is head of the Viral Hepatitis Epidemiology and Prevention Program and an NHMRC Senior Research Fellow. She conducts ethnographic, epidemiological and clinical research with a focus on interventions designed to prevent infectious diseases in vulnerable populations, including people who inject drugs and female sex workers.

## ABORIGINAL AND TORRES STRAIT ISLANDER HEALTH PROGRAM 2012 STUDIES

### STRIVE

This study is a cluster randomised trial with an intervention of a sexual health quality improvement program (SHQIP) aimed at reaching best-practice targets in STI control. It is located in 68 remote communities, comprised of 23 clusters of communities, in the Northern Territory, Western Australia and Far North Queensland. Baseline prevalence data for chlamydia, gonorrhoea and trichomonas has been collected from 64 of 68 health services that are participating in the trial and prevalence assessment reports have been fed back to health services. STRIVE coordinators have completed a baseline systems assessment for health services that were randomised to year one of the SHQIP and implemented sexual health action plans with goals set to improve sexual health service delivery. Coordinators have conducted three and six month visits of randomised health services with reports of STI testing activity derived from lab data presented to services.

**Status:** All participating sites will receive the intervention and the trial is currently in the second year of the activated arm. Year three sites are due to commence the intervention from May 2013 onwards. STRIVE field coordinators are conducting site visits to provide feedback on STRIVE best practice target activity prior to the intervention and since the sexual health quality improvement program commenced. Modifications have been made to patient information systems with the inclusion of STI templates, STI clinic reports are under development, tailored action plans have

been developed and the first round of incentive payments have been sent to health services based on their progress towards best practice targets.

**Personnel:** John Kaldor, James Ward, Alice Rumbold, Rebecca Guy, Robyn McDermott, Lisa Maher, Basil Donovan, Linda Garton, Christopher Fairley, Bronwyn Silver, Janet Knox, Belinda Hengel, David Glance, Skye McGregor, Donna Ah Chee, John Boffa, Steven Skov, Debbie Taylor-Thomson  
**Funding:** NHMRC Project Grant

### REACCH: Research Excellence in Aboriginal Community Controlled Health

REACCH is a collaborative project led by the Kirby Institute and NACCHO working with four Aboriginal Community Controlled Health Services in urban and regional areas. REACCH works with services to conduct community-driven clinical research with the potential to lead to improved health outcomes, foster training of clinical researchers working within Aboriginal Community Controlled Health Services and ensure effective translation of research outcomes into clinical practice.

**Status:** A group quality improvement project is underway with six monthly reporting of STI and BBV testing and outcomes with CQI visits underway in several services. Service-led projects are under way or under development in three services and two Aboriginal researchers have been appointed with REACCH funding to lead these projects.  
**Personnel:** John Kaldor, James Ward, Dea Delaney Thiele, Sophie Couzos, David Scrimgeour, Jenny Hunt, Greg Dore, Basil Donovan, Mary Ellen Harrod, Mark Saunders, Sid Williams, Peter Waples-Crowe, Julie Mooney-Somers  
**Funding:** NHMRC Centre for Clinical Research Excellence (CCRE)

### GOANNA

The first Australian study assessing knowledge, risk behaviours and health service access in relation to sexually transmissible infections and blood borne viruses of young Indigenous people. This is the first-ever Australian study describing levels of knowledge, risk practice and access to health services in relation to sexually transmissible infections (STIs) and blood borne viruses (BBVs) of young Aboriginal and Torres Strait Islander people aged 16 to 30 years.  
**Status:** Currently underway; 40 survey collections sites completed  
**Personnel:** James Ward, Heather Worth, Donna Ah Chee, John Kaldor, Smith A, Marion Pitts, Joanne Bryant  
**Funding:** Australian Research Council (ARC) Linkage Grant

### Australian Chlamydia control effectiveness pilot (ACCEPT) study

Current national guidelines for general practitioners (GPs) recommend all sexually active people aged 15-29 years old receive annual testing for chlamydia. More than 80% of 15-29 year-olds attend a GP each year however less than 10% are being tested for chlamydia by their GP. ACCEPT involves a multifaceted intervention in the GP setting to maximise testing rates and annual testing in sexually active 16-29 year-olds to see if it can reduce the prevalence of chlamydia infections and associated complications such as pelvic inflammatory disease (PID). This is the first trial of this nature in Australia and is being led by the Centre for Women's Health, Gender and Society at the University of Melbourne in collaboration with a large consortium of experts including a number of researchers from the Kirby Institute. In addition, the Kirby Institute has been contracted to develop the

protocol for program evaluation, conduct mathematical modelling, and assist with implementation.

**Status:** 48 postcodes have been recruited.

**Personnel:** Rebecca Guy, John Kaldor, Basil Donovan, David Regan, David Wilson, Matthew Law, Rebecca Lorch, Lisa Edward, James Ward, Belinda Ford  
**Collaborators:** Jane Hocking, Meredith Temple-Smith, Jenny Walker, Simone Poznanski, Alaina Vaisey, Dyani Lewis, Jane Gunn, Christopher Fairley, Nicola Low, Marian Pitts, Marion Saville, Dorota Gertig, Sepehr Tabrizi, Margaret Hellard

**Funding:** Australian Government Department of Health and Ageing Chlamydia Pilot Program. Further funding from NHMRC Project grant from 2011.

**Co-location:** *Sexual Health Program, Public Health Interventions Research Group, Biostatistics and Databases Program, Aboriginal and Torres Strait Islander Health Program*

---

### An Evaluation of Aboriginal Sexual and Reproductive Health and Viral Hepatitis Program in selected Aboriginal Community Controlled Health Services

This evaluation program seeks to examine changes in service delivery within selected Aboriginal Community Controlled Health Services (ACCHS) throughout NSW. Sexually transmissible infections (STIs) for Aboriginal youths aged 16-25 years of age and blood-borne viral (BBV) infections for patients aged 16-54 years will be monitored over time by examining the number of diagnostics tests conducted in relation to occasion of service, rate of positive test results and care and management of diagnosis (with particular regards to viral hepatitis).

A further component of this program will be to examine demographic and behavioural correlates of sexual and reproductive health knowledge and risk behaviours. This evaluation aims to determine if a continuous quality improvement program can improve STI/BBV testing and management practices in Aboriginal Community Controlled Health Services throughout NSW.

**Status:** Evaluation updates have been presented at several national conferences.

**Personnel:** John Kaldor, Handan Wand, Rebecca Guy, Brigitte Gerstl, Amalie Dyda, Andrew Nakhla, Mary Ellen Harrod, Stephen Anthony, James Ward (Baker IDI), Douglas Boyle (Melbourne University)

**Collaborating centres:** Family Planning NSW; AH&MRC; Bulgarr Ngaru Aboriginal Community Controlled Health

Service; Biripi Aboriginal Corporation Medical Centre Taree; Coomealla Health Aboriginal Corporation; Coonamble Aboriginal Health Service; Griffith Aboriginal Medical Service; AMS Western Sydney; Hunter New England Health; National Centre in HIV and Social Research

**Funding:** NSW Health

---

### SHIMMER: NSW Aboriginal Health Research Program

This project is trialling a sexual health and quality improvement program designed to improve STI/BBV testing and management at four Aboriginal Community Controlled Health Services in NSW. The project aims to increase STI/BBV testing, re-testing and follow-up. Another aim is to improve the clinical management and ongoing monitoring of patients diagnosed with chronic hepatitis B and hepatitis C. The overall aim of SHIMMER is to incorporate sustainable sexual health testing and management processes in each participating ACCHS, irrespective of staff turnover.

**Status:** Since March 2012, SHIMMER researchers have been visiting the participating ACCHS and meeting with clinic staff who have been developing long term sustainable STI testing and management strategies for their ACCHS and communities. Overall, the proportion of 15-29 year-olds tested for chlamydia and gonorrhoea has increased. SHIMMER will be conducting a second audit in March 2013 to examine STI and hepatitis C management.

**Personnel:** James Ward, Basil Donovan, Rebecca Guy, Simon Graham, Janet Knox, Handan Wand, John Kaldor  
**Funding:** NSW Health

---

### Increasing completeness of 'Aboriginality' in infectious diseases data through record linkage – a feasibility study

The aim of this project is to link notifiable diseases database with other health data and provide availability and validity of epidemiological data on notifiable diseases in Aboriginal people in NSW, so that incidence and prevalence of these diseases can be more accurately estimated. The objective of this project is to link records from the Notifiable Diseases Database (NDD) with other routinely collected population health databases to prepare a de-identified 'snapshot' dataset, with improved completeness of Aboriginal status.

**Status:** Linkage complete; data analysis and interpretation underway

**Personnel:** Jeremy McAnulty, James Ward, Amalie Dyda, Paula Spokes, Jenny Hunt, Mark Bartlett

**Funding:** NSW Health

---

## BIostatistics and Database Program 2012 Studies

---

### The Australian HIV Observational Database (AHOD)

Observational cohort study of patients with HIV. Demographic, clinical and treatment data are aggregated twice each year via electronic data transfer.

**Status:** The study commenced in December 1999 and currently has 26 active sites contributing data twice yearly on a total of >3500 enrolled patients.

**Personnel:** Hamish McManus, Stephen Wright, Courtney Bendall, Kathy Petoumenos, Matthew Law

**Collaborators:** Network of clinical sites (GPs, hospitals and sexual health clinics) throughout Australia

**Funding:** Foundation for AIDS Research (amFAR) via a US National Institutes of Health grant through the International Epidemiologic Databases to Evaluate AIDS collaboration; consortium of pharmaceutical companies.

---

### The Data Collection on the Adverse Events of Anti-HIV Drugs Study (DAD)

This large, international, collaborative study is aimed at assessing the medium to long-term effects of antiviral treatment of people with HIV in terms of possible increased risk of cardiovascular events.

**Status:** The study combines data from 11 cohorts, including more than 33,000 patients. Australia contributes 706 patients from the Australian HIV Observational Database.

**Personnel:** Hamish McManus, Stephen Wright, Kathy Petoumenos, Matthew Law

**Collaborators:** Network of clinical sites (GPs, hospitals and sexual health clinics) throughout Australia; Copenhagen HIV Programme, Hvidovre University Hospital

**Funding:** European Agency for the Evaluation of Medicinal Products (EMEA)

---

### The Australian HIV Observational Database (AHOD) STI project

Sexual health clinics in AHOD will contribute data on sexually transmissibly

infections and treatment in patients recruited to AHOD.

**Status:** Protocol agreed with 11 sites involving around 900 patients. Protocol is under review by ethics committees. First data transfer and analysis in March 2011.

**Personnel:** Kathy Petoumenos, Hamish McManus, Stephen Wright, Courtney Bendall, Matthew Law

**Collaborators:** Network of 11 Australian sexual health clinics

**Funding:** National Health and Medical Research Council, NIH, EMEA and pharmaceutical consortium

---

### The Australian HIV Observational Database Temporary Residents Access Study

An AHOD sub-study recruiting 180 HIV-positive legal temporary residents who are ineligible for Medicare and providing free antiretroviral for a maximum of four years. Recruitment to this study commenced November 2011. Antiretrovirals are provided by all seven pharmaceutical companies with licensed anti-HIV drugs in Australia.

**Status:** Ongoing

**Personnel:** Hamish McManus, Stephen Wright, Courtney Bendall, Kathy Petoumenos

**Collaborators:** National Association of people living with HIV/AIDS (NAPWA)

---

### Mathematical modelling of human papillomavirus transmission

This research involves the design, implementation and analysis of mathematical models for assessing the health-economic impact of Human papillomavirus (HPV) vaccination, screening and testing policies in Australia.

**Status:** A general HPV modelling framework has been completed allowing for the transmission of multiple HPV types to be modelled. The model has been used to estimate the long-term impact of the current female-only vaccination programme, and a theoretical male + female vaccination programme, on the incidence of genital warts due to HPV types 6 and 11 as well as the incidence of infection due to HPV types 6, 11, 16, and 18. The results of this work were reported in a Technical Report and formed part of a submission to the Pharmaceutical Benefits Advisory Committee for males to be included in the National HPV Immunisation Programme. The model is being further developed to incorporate progression to HPV-related disease (e.g.,

cervical intraepithelial neoplasia and cervical cancer). New methodology has been developed to facilitate the calibration of the model in a Bayesian framework.

Individual-based models have been developed to investigate the potential impact of HPV vaccination on non-vaccine types and to assess the implications of changes in HPV ecology for surveillance.

**Personnel:** David Regan, Matthew Law, Andrew Grulich, John Kaldor, Igor Korostil, Edward Waters

**Collaborators:** CSL Limited, Victorian Cytology Service Incorporated, University of Melbourne, La Trobe University

**Funding:** Australian Research Council, CSL Limited, Victorian Cytology Service Incorporated

---

### Mathematical modelling of bacterial STIs in Australian sub-populations

This research involves the design, implementation and analysis of mathematical models for assessing the health economic impact of public health interventions for the control and prevention of chlamydia, gonorrhoea, syphilis and trichomoniasis in different populations in Australia. The models will address the STIs that are of most importance in heterosexual, MSM, and indigenous populations, respectively. **Status:** A range of compartmental and individual-based models have been developed to evaluate a wide range of screening and intervention strategies for the control and prevention of bacterial STIs in remote individual communities and to assess the potential importance of community mobility in sustaining high prevalence of STIs in these communities. A model of gonorrhoea transmission, incorporating infection at different anatomical sites, is in development to assess the potential impact of moving from culture to NAAT as the primary diagnostic test.

**Personnel:** David Regan, David Wilson, Ben Hui, Matthew Law, Rebecca Guy, Basil Donovan, John Kaldor

**Collaborators:** University of Melbourne, La Trobe University, Deakin University

**Funding:** National Health and Medical Research Council

---

### TREAT Asia HIV Observational Database (TAHOD)

Observational cohort study of patients with HIV at 19 sites throughout the Asia-Pacific region. Demographic, clinical and treatment data are aggregated twice each year via electronic data transfer.

**Status:** At the data transfer in March 2011, baseline and retrospective data from some 5000 patients from 19 sites were aggregated. It is expected that follow-up will continue for at least a further three years.

**Personnel:** Jialun Zhou, Awachana Jiamsakul, Matthew Law, David Cooper

**Collaborators:** Network of 19 clinical sites at countries throughout the Asia-Pacific region

**Funding:** American Foundation for AIDS Research (amfAR) via a US National Institutes of Health grant through the International Epidemiologic Databases Evaluating AIDS collaboration

---

### TREAT Asia Studies Evaluating Resistance (TASER)

There are two studies: First, a surveillance study (TASER-S) examining rates of transmitted HIV-resistance in newly diagnosed HIV-infected subjects not previously treated with antiretroviral drugs. Second, a monitoring study (TASER-M) assessing rates of developing HIV-resistance in patients starting antiretroviral treatments.

**Status:** Approximately 2000 naive and experienced patients had been recruited to TASER-M. Enrolment and follow up have ceased. The TASER-M cohort will be terminated in December 2011 with some of the patients being transferred into TAHOD for future follow-up.

TASER-S: Approximately 480 patients have been recruited from five sites. Recruitment has ceased for this study.

**Personnel:** Awachana Jiamsakul, Jialun Zhou, Matthew Law

**Collaborators:** Network of 12 sites in South East Asia

**Funding:** American Foundation for AIDS Research (amfAR) via a grant from the government of the Netherlands

---

### TREAT Asia Paediatric HIV Observational Database (TApHOD)

TREAT Asia Paediatric HIV Observational Database (TApHOD) is a collaborative cohort of HIV-infected children in the Asia-Pacific region. The study participants are recruited from TREAT Asia clinical sites. Demographic, clinical and treatment data are aggregated twice each year via electronic data transfer. Currently, 18 sites in six countries have agreed to participate and transferred their data to the Kirby Institute.

**Status:** Up to March 2011, 4045 children were recruited into TApHOD. Of these, 3277 (81%) children have received

antiretroviral treatment. There have been 345 (8.5%) deaths, 490 (12.1%) lost to follow-up, and 416 (10.3%) transfers to other clinics.

**Personnel:** Azar Kariminia, Matthew Law

**Collaborators:** Network of 18 sites initially throughout the Asia-Pacific region

**Funding:** TAPHOD is funded by The Foundation for AIDS Research (amfAR), the Austrian AIDS Life Association, and the US National Institute of Child Health and Human Development (NICHD).

## HIV EPIDEMIOLOGY AND PREVENTION PROGRAM 2012 STUDIES

### HIV vaccine preparedness cohort study (Health in Men study)

The HIM study was conducted as a HIV vaccine preparedness study, to describe HIV and STI incidence and associated risk behaviours, and attitudes towards HIV prevention technologies, in a community-based sample of HIV negative homosexual men. Men were interviewed twice yearly about a wider range of HIV and STI risk behaviours, and about their attitudes towards HIV prevention. They were tested annually for HIV, syphilis, gonorrhoea and chlamydia, and consent was collected for later testing of stored specimens. By 2011, stored samples from consenting participants had been tested for antibodies to hepatitis C, herpes simplex types 1 and 2, *Helicobacter pylori* and human papillomavirus. In a substudy, around 300 men also underwent an anal pap smear. Those with an abnormality on pap smear also underwent a high resolution anoscopy. Chlamydia positive tests underwent further testing to examine whether *lymphogranuloma venereum* was present in this population.

**Status:** By the end of the study 1427 men had been followed for over 5000 person-years.

**Personnel:** Andrew Grulich, Garrett Prestage, Jeff Jin, Mary Poynten, David Templeton, Brian Acraman, Patrick McGrath, Jack Bradley, Harry Smith, Leon Botes, Daniel O'Neill, Paul Kelly, Kim Scholey, Lara Cassar, Hédimo Santana, Matthew Hua, Joanne Holden, Suzanne Kippax, Limin Mao, John Imrie

**Collaborating centres:** National Centre in HIV Social Research; Royal Women's Hospital, Melbourne; Sexually Transmitted Infections Research Centre, University of Sydney

**Funding:** NHMRC; NSW Health

### The Opposites Attract study

A four-year cohort study to examine the effect of HIV treatment and HIV viral load on the rate of HIV transmission in 240 HIV serodiscordant gay couples.

**Status:** The study started recruitment in early 2012.

**Personnel:** Andrew Grulich (PI), Garrett Prestage, Iryna Zablotska, Jeff Jin, Ben Bavinton, Lara Cassar, David Cooper, Anthony Kelleher, David Wilson, Kersten Koelsch, Christopher Fairley, Kathy Triffitt, Sean Emery, Kate Merlin, Jennifer Hoy, Darren Russell, Ban Kiem Tee, Nick Doong, David Baker, Robert McFarlane, David Orth, Mark Bloch, Richard Moore, William Donohue, Norm Roth, David Templeton, Anna McNulty, Emanuel Vlahakis, Mark Kelly.

**Collaborators:** The Alfred Hospital, Cairns Sexual Health Service, Centre Clinic, Dr Doong's Surgery, East Sydney Doctors, Gladstone Road Medical Centre, Holdsworth House Medical Practice, Melbourne Sexual Health Centre, Northside Clinic, O'Brien Street General Practice, Prahran Market Clinic, Royal Prince Alfred Hospital, St Vincent's Hospital Immunology B Ambulatory Clinic, Sydney Sexual Health Centre, Taylor Square Private Clinic, Sexual Health and HIV Service Clinic 2

**Funding:** NHMRC Project grant

### Modelling interventions to prevent HIV infection and their acceptability among gay men in NSW

This study uses mathematical modelling to estimate the likely impact of a range of interventions designed to reduce rates of HIV infection among gay men, and uses both quantitative and qualitative research methods to assess how acceptable such interventions would be to the target population. The study recruited 600 gay men to answer specific questions about their attitudes toward a range of possible interventions through an online survey and were then invited to participate in five focus groups in Sydney. Data from mathematical models were considered alongside the findings from the acceptability study.

**Status:** Data collection completed; data analysis and reporting is ongoing

**Personnel:** Garrett Prestage, Jack Bradley, Ian Down, David Wilson, Richard Gray

**Collaborators:** Australian Research Centre in Sex Health and Society

**Funding:** NSW Health

### Risk factors for HIV seroconversion (The Seroconversion Study)

A study of risk factors for HIV infection among people recently diagnosed with HIV infection. The findings from this study inform HIV organisations and state health departments about the contexts of risk behaviours and motivations for these behaviours. The study also considers current gaps in policy and program development and implementation, including in the research base, by interviewing individuals who have recently been diagnosed with HIV about the factors they believe led to their HIV seroconversion and their experiences since receiving their diagnosis.

**Status:** By January 2013, 484 individuals who had recently seroconverted had participated in the survey and 92 had been interviewed. The study continues to recruit participants

**Personnel:** Garrett Prestage, Ian Down, Jack Bradley, Andrew Grulich, Jeanne Ellard, Kathy Triffitt, Graham Brown

**Collaborators:** National Centre in HIV Social Research; Australian Research Centre in Sex, Health and Society; Curtin University; State AIDS Councils, State PLWHA organisations, and State Health Departments.

**Funding:** Queensland Health; Victorian Department of Health; NSW Health Department; Western Australian Health Department; South Australian Department of Health; Tasmanian Department of Health; Health Department of the ACT

### PEP users in Sydney, NSW: pilot cohort

A cohort of PEP users at St. Vincent's Hospital, Sydney, with quantitative behavioural data collection at enrolment when men request PEP, at the completion of PEP course and six months after completing the PEP course. The aims were to assess ability to enrol and maintain a cohort of PEP users and to compare sexual practices of participants before, during and after their PEP course. As a pilot study, this cohort prepared and tested the methodology of recruitment and data collection in a pilot cohort of NPEP users.

**Status:** Enrolment complete.

**Personnel:** Iryna Zablotska, John McAllister

**Collaborators:** St Vincent's Hospital PEP clinic

**Funding:** Kirby Institute

---

### The PASH (Pleasure and Sexual Health) Study: understandings of risk among gay men

A study of beliefs and attitudes about risks and consequences of HIV infection in Australian gay men. Data collection is completed: In total, 4125 men were referred to the survey, of whom 2306 provided sufficiently complete survey questionnaires for inclusion in analysis. 40 men were interviewed in depth. The aims of the PASH Study were to interview gay men about their current beliefs and understandings of HIV, and the risk of HIV transmission, and the relations between these and pleasure; inform HIV organisations and state health departments about the contexts of risk behaviours and motivations for these behaviours; and consider current gaps in policy and program development and implementation, including in the research base..

**Status:** In the five months of recruitment, 2306 online responses were collected, while 40 men were interviewed.

**Personnel:** Pól Dominic McCann, Garrett Prestage, Ian Down, Jack Bradley, Michael Hurley, Graham Brown  
**Collaborating centre:** Australian Research Centre in Sex, Health and Society, La Trobe University  
**Funding:** State health departments.

---

### Sexually adventurous men's study (SAMS)

A study to document and record the work of the Sexually Adventurous Men's Projects of the Victorian AIDS Council and PLWHA Victoria, and to investigate the beliefs and behaviours among gay men in sexually adventurous networks in Melbourne.

**Status:** Processes and record-keeping documentation have been established, and data collection is ongoing. Interview schedules have been developed.

**Personnel:** Garrett Prestage.  
**Collaborators:** Australian Research Centre in Sex Health and Society; Victorian AIDS Council; PLWHA Victoria.  
**Funding:** Victorian Health Department

---

### Defining risk and mechanisms of permucosal transmission of acute HCV infection within high-risk populations (RAMPT-C Study)

Hepatitis C (HCV)-related liver disease has emerged as a major contributor to morbidity and mortality among

people with HIV. Recently, epidemics of acute HCV among HIV-infected men who have sex with men (MSM) have been reported in UK, Europe, USA and Australia. All of these cohorts report permucosal, including high-risk sexual, rather than parenteral, usually injecting drug use (IDU), risk associated with HCV transmission. This study of HCV transmission and its risk factors among homosexual men recruited HIV-positive gay men recently diagnosed with hepatitis C to answer specific questions about their knowledge of hepatitis C and their beliefs about its transmission.

**Status:** Data collection will continue with an overseas component (London). Australian data collection was completed in December 2011.

**Personnel:** Garrett Prestage, Ian Down, Jack Bradley, Mark Danta, Gail Matthews, Tanya Applegate, Margaret Hellard, Joseph Sasadeusz

**Funding:** NHMRC

---

### Monogamy: meanings and practices among gay men

This is a study of gay men's attitudes toward and beliefs about monogamy, and how that affects the kinds of relationships they form. Gay men are being interviewed in depth about the concept of monogamy and their own relationships.

**Status:** Data collection is complete.

**Personnel:** Garrett Prestage  
**Collaborators:** Australian Research Centre in Sex Health and Society  
**Funding:** NHMRC

---

### Periodic surveys of HIV risk behaviour (The Gay Community Periodic Surveys)

A repeated cross-sectional survey conducted annually in each participating state of sexual risk behaviour, HIV and STI testing, and illicit drug use among gay men in Australia. In 2011, more than 9000 behavioural questionnaires surveys were completed in Sydney, Melbourne, Adelaide, Perth, Canberra and Brisbane, as well as in certain regional areas of Queensland.

**Status:** Ongoing annual surveillance, with about 8000-9000 men participating each year.

**Personnel:** Garrett Prestage, Iryna Zablotska, Andrew Grulich, Martin Holt, John de Wit, Limin Mao  
**Collaborators:** National Centre in HIV Social Research; State AIDS Councils; State PLWHA organisations; State Health Departments

**Funding:** State and Territory Health Departments

---

### Predictors of PEP awareness and use in Australian Gay Community (Australian Gay Community Periodic Surveys)

A quantitative study of trends in PEP awareness and use among gay men in Australia. In 2011, all behavioural questionnaires completed by the participants in Sydney, Melbourne, and Brisbane Gay Community Periodic Surveys were analysed in parallel with the analyses of data from the PEP clinic in St. Vincent's hospital. Analyses of PEP use were published in the *Journal of Acquired Immune Deficiency Syndromes*.

**Status:** The team is conducting data analyses of PEP awareness and will be working on the preparation of the report in 2013.

**Personnel:** Iryna Zablotska, John McAllister

**Collaborators:** National Centre in HIV Social Research; State AIDS Councils; State PLWHA organisations; State Health Departments

**Funding:** State and Territory Health Departments

---

### Social norms regarding HIV/STI risk and risk reduction behaviours among men who have sex with men in Australia (CONNECT study)

HIV/STI risk reduction is more likely to occur if community norms regarding risk reduction are supportive and are shared in the community. There is a lack of research on the social norms regarding HIV/STI related behaviours among MSM. The CONNECT Study investigated norms and acceptability of risk reduction strategies in Australian gay communities. This cross-sectional quantitative study used respondent-driven sampling to recruit homosexual men in Sydney, Melbourne and Perth to investigate norms regarding sexual practices across different social/sexual networks.

**Status:** Recruitment was completed in 2012. The research team is currently conducting data analyses for publication.

**Personnel:** Iryna Zablotska, Garrett Prestage, Michelle McKechnie, Ben Bavinton, Matthew O'Dwyer, John De Wit, Graham Brown, Bruce Maycock, Alden Klovdahl, Christopher Fairley, Jeffery Grierson.

**Collaborators:** Curtin University, Aids Council of New South Wales (ACON), Positive Life NSW, Australian Federation

of AIDS Organisations (AFAO), New South Wales Department of Health, Victorian AIDS Council (VAC), People Living with HIV/AIDS (PLWHA), Western Australian AIDS Council (WAAC) and Western Australia Department of Health.  
**Funding:** NHMRC

---

### Mapping gay community networks in Sydney, NSW

No formal research has been undertaken to map the various groups within Sydney's gay community, or to locate them geographically and culturally, and to describe their characteristics, interconnections and the best ways of accessing them. This mixed-method cross-sectional study involved interviews of opinion leaders representing different networks and organisations of gay men in Sydney to describe the structure and functioning of the Sydney gay community. The protocol and data collection instrument were developed. Data collection has commenced and 130 gay community groups and networks have been interviewed by the end of 2011.  
**Status:** 200 groups have been identified and 183 interviews conducted..

**Personnel:** Iryna Zablotska, Garrett Prestage, Michelle McKechnie, Matt O'Dwyer

**Collaborating centres:** The Australian Research Centre in Sex Health and Society at La Trobe University and the gay community organisations and partners (particularly, the AIDS Council of NSW and Positive Life NSW).

**Funding:** NSW Health

---

### TAXI KAB Study

Knowledge Attitudes, and Beliefs (KAB) of gay men in Australia when they Think About eXposure to Infection (TAXI) to HIV. This project describes understandings of HIV risk by gay men in the context of knowledge, attitude and behaviour. The study aims to describe patterns of belief about HIV transmission and relative risk; assess the attitudes these men have developed; and describe the behaviour of these men in those contexts. The study aims to explore the knowledge, attitudes and beliefs around HIV among gay and bisexual men in a single research project that uses quantitative methods. This study would: 1. Measure current attitudes, knowledge levels, and beliefs about HIV among gay men; and 2. Explore these beliefs about relative risk, both in terms of their understandings of the relative risk of transmission and

the relative priority this understanding takes with respect to other aspects of understanding and knowledge which may change or be influenced over time by prevailing healthcare policy, educational efforts, or personal and anecdotal experiences. The responses will provide data that can be analysed to identify key patterns regarding beliefs and attitudes toward HIV, and which will lend itself to close analysis.

**Status:** Recruitment completed, preliminary analysis completed, report underway and expected to be published in March 2013.

**Personnel:** Garrett Prestage, Andrew Grulich, Jack Bradley, Martin Holt, Mary Poynten, Ben Bavinton, Kathy Triffit, Graham Brown, Phillip Keen, Geoff Honnor, Colin Batrouney, Dean Murphy, Lance Schema.

**Collaborating centres:** NCHSR, PositiveLife NSW, La Trobe University, NAPWA, ACON, AFAO

**Funding:** NHMRC

---

### The SPANC study (Study of the prevention of anal cancer)

Gay men are at greatly increased risk of human papillomavirus (HPV)-related anal cancer. This study tracks the precursors of anal cancer in a cohort of HIV negative and HIV positive gay men. This cohort study examines the prevalence, incidence and risk factors for progression of human papillomavirus infection and anal cancer precursors in HIV positive and HIV negative homosexual men aged 35 and older.  
**Status:** By the end of 2011, 190 participants were recruited. Initial analyses were reported on safety and adverse effects of anal cancer screening were presented.

**Personnel:** Andrew Grulich, Jeff Jin, David Templeton, Garrett Prestage, Andrew Grulich, Richard Hillman, Jeff Jin, Mary Poynten, David Templeton, Brian Acraman, Patrick McGrath, Matthew O'Dwyer, Dorothy Machalek, Garrett Prestage, Winnie Tong, Kate Thompson, Suzanne Garland, Christopher Fairley, Jennifer Roberts, Annabelle Farnsworth, Adele Richards, Sepehr Tabrizi, Alyssa Cornwall, Andrew Carr, Kirsten McAffery, Kirsten Howard.

**Collaborating centres:** St Vincent's Hospital Immunology B Ambulatory Clinic; Sexually Transmitted Infections Research Centre, University of Sydney; School of Public Health, University of Sydney; Douglas Hanly Moir Pathology; Royal Women's Hospital, Melbourne.

**Funding:** NHMRC Program Grant

---

### International pooled analysis of immune risk factors for lymphoma

A pooled analysis of case-control studies of immune risk factors for lymphoma. All twelve member studies sent data on a pooled total of 12,982 cases and 16,441 controls, and results on auto-immune disease as a risk factor for non-Hodgkin lymphoma (NHL) were reported.

**Status:** Analyses on infectious conditions and NHL risk were reported.

**Personnel:** Andrew Grulich

**Collaborators:** UNSW Cancer Research Centre; University of Southern California; German Cancer Research Centre; Feinberg School of Medicine, Northwest University; Centre for Study and Prevention of Cancer; Aviano Cancer Centre; Catalan Institute of Oncology; University of California, San Francisco; David Geffen School of Medicine, University of California, Los Angeles; University of York; British Columbia Cancer Registry; School of Medicine, Yale University

**Funding:** Leukaemia Foundation of Australia

---

### Serological studies of HPV in gay Australian men

A sero-epidemiological study of the prevalence, incidence and predictors of infection with a number of different HPV types.

**Status:** In 2011, over 5000 serological samples from the Health in Men study were analysed for antibodies to 10 HPV types at the German Cancer Research Centre (DKFZ) in Heidelberg, Germany. Analyses of the data were completed. Two papers have been published.

**Personnel:** Mary Poynten, Andrew Grulich, Jeff Jin, Dave Templeton, Garrett Prestage, Tim Waterboer, Michael Pawlita, Christopher Fairley, Basil Donovan, Suzanne Garland

**Collaborators:** German Cancer Research Centre (DKFZ), Heidelberg, Germany

**Funding:** STI Program Grant, NHMRC Post-doctoral Training Scholarship (M. Poynten)

---

### IMMUNOVIROLOGY AND PATHOGENESIS PROGRAM 2012 STUDIES

Randomised trial in primary HIV infection looking at three forms of intervention (SPARTAC)

SPARTAC (short pulse antiretroviral treatment at seroconversion) looks at the effect on CD4 T-cells of three interventions at primary HIV infection, either treating with antiretroviral therapy for 12 or 48 weeks or not treating at all until CD4 declines to <350 cells. Enrolment ceased in June 2007, by which time 37 patients had been screened, and 31 patients continue to be followed up. **Status:** Study completed, primary manuscript accepted for publication in NEJM.

**Personnel:** Anthony Kelleher, Pat Grey  
**Collaborators:** Jonathon Weber, Sarah Fidler, Robert Finlayson, Mark Bloch, Robert McFarlane, Cassy Workman, Nick Doong, David Cooper, Mark Kelly, Norman Roth, Dr BK Tee, Richard Moore, Philip Cunningham, Kate McGhie, Julie Yeung  
**Funding:** Wellcome Trust

---

### Laboratory surveillance of incident HIV infection

Laboratory markers are used to determine incident from established HIV infection to monitor the trends in newly acquired infections, providing an important sentinel surveillance tool. BED ELISAs, and analysis of other routine laboratory markers used in the diagnosis of HIV infection, are used in monitoring new infections.

**Status:** All newly identified cases of HIV infection at the NSW State Reference Laboratory for HIV at St Vincent's Hospital were analysed on BED assays. Protocols were further developed towards a goal of deriving viral sequence for RT protease and integrase genes from dried blood spots. This would allow sophisticated molecular epidemiology to be performed even in resource-poor settings.

**Personnel:** Anthony Kelleher  
**Collaborators:** Philip Cunningham, St Vincent's Hospital, Sydney; Sara Evans, Celine Yang, Kazuo Suzuki, Jane Cornwall  
**Funding:** NSW Health Department

---

### Primary HIV and early disease research – Australian cohort (PHAEDRA) Extension

A systematic mechanism to follow-up the PHAEDRA and Core01 cohorts in Sydney and Melbourne with acute and early HIV-1 infection.

**Status:** Good follow-up of patients already enrolled and some patients rolled over from SPARTAC. Database

and repository provided basis for several publications and ongoing and new collaborations

**Personnel:** Pat Grey, Ansari Shaik, David Cooper, Anthony Kelleher.

**Collaborators:** Robert Finlayson, Mark Bloch, Cassy Workman, Robert McFarlane, Dr B.K. Tee, Norman Roth, Phillip Cunningham, John Zaunders, Tim Read, John Murray (School of Mathematics)

**Funding:** NHMRC Program Grant

---

### Australian Long-Term Non-progressor Study

The Australian long-term non-progressor cohort study was established in 1994 and is ongoing. Studies focussing on identifying the reason this rare group of people with prolonged HIV infection remain healthy, with virtually no damage to their immune system, are extremely important for understanding the pathogenesis of HIV and for developing new antiretroviral therapy and preventative vaccines.

**Status:** Of the 163 participants recruited to this cohort 42 individuals (sustained non-progressors) are still treatment-naïve. Four new patients were recruited in 2012. Provided basis for a several publications.

**Personnel:** Anthony Kelleher, Pat Grey, Ansari Shaik, John Kaldor, David Cooper

**Collaborators:** Long-Term Non-progressor Study Group, including clinical sites in Sydney, Port Kembla, Canberra, Brisbane and Melbourne; Kat Marks, St Vincent's Hospital, Sydney; Stephen Kent and Ivan Stratov, University of Melbourne. International collaboration includes Elite Controller Collaborative Project and the International AIDS Vaccine Initiative (IAVI).

**Funding:** NHMRC

---

### Specimen receipt and processing for clinical trials and natural history studies

The laboratory provides a service to other Kirby Institute programs encompassing the separation of blood components including but not limited to; cryopreservation of serum, plasma and PBMC, archiving and on shipping of samples. The service also includes database management of the storage of these samples. Staff also have experience with the implementation of assays which are not offered by local diagnostic laboratories. This service contributes to

the overall smooth running of clinical trials and natural history studies.

**Status:** Ongoing

**Personnel:** Anthony Kelleher

**Collaborators:** Kate Merlin, Julie Yeung, Maria Piperias, Bertha Fsadni (St Vincent's Hospital, Sydney)

**Funding:** Project-specific grants

**Co-located:** *Viral Hepatitis Clinical Research Program and Immunovirology and Pathogenesis Program*

---

### RESTORE

An observational study to explore reconstitution of immunity in patients with advanced HIV-1-infection commencing combination antiretroviral therapy

**Target:** 50 patients recruited and in follow-up

**Status:** week 48 follow up completed

**Sites:** one site in Thailand

**Personnel:** Denise Hsu, Sarah Pett, Sean Emery, Anthony Kelleher,

**Collaborators:** Jintanat Ananworanich, Sasiwimol Ubolyam, Anchalee Avihingsanon, Kiat Ruxrungham,

Praphan Phanuphak, HIV-NAT Bangkok

**Funding:** NHMRC, UNSW

---

### Dynamic trafficking of HIV spread

HIV as a cell-free viral entity is vulnerable to many attacks by the innate and acquired immune system. To get around these often hostile conditions, HIV predominately spreads from one cell to the next when they are intimately contacting each other in a structure referred to as a synapse. Whilst the main objective for virus to move across a synapse is evasion, it may also be seen as a form of synchronised infection. For instance, once an infected cell makes contact with a future HIV target, the virus actively promotes release of many virions towards this neighbouring target. This effectively overwhelms the new cell with virus, making it difficult for natural defences and also antiretroviral drugs to stop and/or control. This project represents a study only currently capable in a few laboratories worldwide, as it has taken years to develop appropriate HIV constructs that could be used to visualise in primary infected cells. The major aim of this project is to track live infectious HIV moving from cell to cell and delineate key cellular pathways the virus corrupts in this process.

**Status:** For the first time, we have identified HIV using long acting-based structures to co-ordinate spread to new targets. The virus does so by embedding



in the tips of long finger-like projections called filopodia. In doing so, the virus has hijacked a probing structure that is otherwise used by cells of the immune system to initiate communication of the immune response.

**Personnel:** Stuart Turville, Anupriya Aggarwal, Tina Iemma, Ivy Shih

**Collaborators:** Thomas Hope, Timothy Newsome

**Funding:** NHMRC

---

## Novel inhibitors of HIV entry

The site where HIV fuses to the cellular membrane has remained one of the most controversial areas in HIV biology. As HIV can fuse with cellular membranes in a pH independent manner, it is already assumed that the virus can directly fuse with the plasma membrane. However, recent studies knocking down both Dynamin and Clathrin proteins, has highlighted HIV may favour entry via endosomal membranes. Through a collaborative venture with Professor Philip Robinson at the Children's Medical Research Institute, we are currently testing a portfolio of Dynamin and Clathrin specific set of compounds and their impact on HIV entry.

**Status:** We have developed an imaging platform of uniquely labelled virions, to map the entry, fusion and uncoating of the virus under normal conditions and in the presence of inhibitors. In conjunction with high throughput assays, we have identified a novel block to HIV entry using Dynamin and Clathrin specific compounds, but not at the level of viral fusion as expected. Rather, the block is at the time of reverse transcription, with little to no block at the time of entry/fusion.

**Personnel:** Stuart Turville, Tina Iemma, Anupriya Aggarwal

**Collaborators:** Philip Robinson

**Funding:** Australian Centre for HIV and Hepatitis Virology Research (ACH2)

**Location:** *Immunovirology and Pathogenesis Program*

---

## Lentiviral vectors and gene therapy

The quest for a HIV cure is top on the list of objectives worldwide in the fight against this disease and therapy by lentiviral vectors is one means to attack the virus potentially at multiple levels. One of the key limitations to the use of gene therapy is the natural resistance of immune cells to this procedure. Thus understanding why cells of the immune

system are resistant to gene therapy, will help in increasing the efficacy of this type of treatment.

**Status:** Using lentiviral vectors that can package the related monkey virus protein VPX, we and others have been able to introduce genes into highly resistant cells (macrophages and dendritic cells) at efficiencies of greater than 60%. Presently, we are targeting resting primary CD4 T cells, with the aim of raising gene transduction to similar levels. In doing so we wish later to create cells of the immune system that are resistant to future HIV infection.

**Personnel:** Stuart Turville, Sam McAllery, Anupriya Aggarwal, Tina Iemma

**Collaborators:** Nathaniel R. Landau

**Funding:** NHMRC

---

## Assays of T-cell function, proliferation and cytotoxicity, and identification of antigen-specific T-cells

A range of flow cytometric assays for assessing CD4+ and CD8+ T-cell function are worked up in the laboratory. The measures of antigen-specific T-cells include T-cell proliferation, activation and cytokine secretion. Such assays are important for understanding HIV pathogenesis and in responses to vaccines, and therefore are included in the protocols of clinical trials and natural history studies carried out by the Kirby Institute. Assays were performed as part the PINT trial of therapy with the integrase inhibitor, Raltegravir and the Restore and PrIRIS studies in Bangkok and Sydney respectively. Other studies were conducted as part of the PHIIDO observational study of primary HIV infection. These assays were validated in the context of two competed clinical studies assessing latent TB infection in Bangkok and Sydney; in a clinical study of CMV re-activation and Adenovirus infection following paediatric bone marrow transplantation, and in following immune responses with gluten induced flares of Coeliac disease. Assays were also conducted to elucidate the generation of CD4+ T-cell responses during primary vaccinia vaccination.

**Status:** Continued analysis of samples from PHAEDRA and the long-term non-progressor cohorts, TB studies completed, studies of CMV disease completed in 2011 and coeliac study commenced.

**Personnel:** Susanna Ip, Laura Cook, Mee-Ling Munier, Michelle Bailey, Yin Xu, Chansavath Phetsouphanh, Celine Yan, Anthony Kelleher, Denise Hsu

**Collaborators:** John Zaunders, Mahila Namasivayam, Tony Walls, John Ziegler, Nabila Seddiki, Stephen Kent, Bob Anderson, Jason Tye-Din, Jintanat Ananworanich, Sasiwimol Ubolyam, Anchalee Avihingsanon, Kiat Ruxrungham, Praphan Phanuphak

**Funding:** NHMRC, St Vincent's Hospital, Coeliac Foundation

**Co-located:** *Viral Hepatitis Clinical Research Program and Immunovirology and Pathogenesis Program*

---

## RNA inducing viral latency

This project is related to siRNA gene silencing for HIV-1 and SIV infection. siRNAs targeting viral promoter DNA region induce transcriptional gene silencing (TGS) of viral genes in infected cells. The study has been extended to two major objectives: delivery system of siRNA and mechanism of gene silencing. To develop and evaluate delivery systems including lentiviral and non-viral systems for use in a humanised mouse HIV-1 infection model; and to define the pathways by which dsRNAs targeting the promoter regions of HIV-1 and SIV. Silencing constructs applicable for use in HIV-1 infection have been development. These constructs have been incorporated into a lentiviral delivery system, which will be assessed *in vitro*. Epigenetic changes induced by siRNAs targeting HIV-LTR will also be defined. We also investigated the subcellular localisation of Argonaute proteins (Ago) during the TGS process and recently reported the presence of Ago1 in the nucleus and Ago2 in the nuclear membrane as demonstrated by confocal microscope using tagged Ago1/Ago2 and fluorescently labelled siRNA. We also demonstrated colocalisation between Ago1 or Ago2 and F-actin and are currently following up of this novel finding to potentially link transport of the molecules from the cytoplasm into the nucleus where they would then act on the HIV-1 promoter to initiate gene silencing.

**Status:** successful completion of in vivo proof of principle experiments using SCID-Hu mouse model of HIV-1 infection with Japanese collaborators

**Personnel:** Anthony Kelleher, Chantelle Hood, Sanjay Swaminathan

**Collaborators:** Kazuo Suzuki, Takaomi Ishida, Makoto Ymamagisi, Toshiki Watanebe

**Funding:** NHMRC

**Co-located:** *Viral Hepatitis Clinical Research Program and Immunovirology and Pathogenesis Program*

---

## HIV drug resistance and viral tropism

This project involves the development of expertise in the application of a number of methods of detecting antiretroviral drug resistance through genotypic testing of HIV isolates. The program has three major projects: evaluation and conducting commercially available genotype testing for protease, reverse transcriptase regions; development of a new, cheap in-house genotyping method from blood dry-spots as a starting material; and development of assays for the determination of CCR5 tropism of patient's HIV isolates. More than 700 HIV-1 resistance genotypes have been performed based on the commercial based resistant assays. Validation of new in-house genotyping method is close to completion. The CCR5 tropism assay for RNA has been transferred to the NSW State reference laboratory at St Vincent's and is being used for routine care. The validation of the DNA version of this assay is complete and has been used for routine patient care since January 2012.

**Status:** In routine use

**Personnel:** Anthony Kelleher, Celine Yan, Kerstin Koelsch, Yong Pan

**Collaborators:** Kazuo Suzuki, Kat Marks, Nick Rismanto Philip Cunningham, Leon McNally, Alexander Carrera

**Funding:** NSW Health Department, ViiV

**Co-located:** *Viral Hepatitis Clinical Research Program and Immunovirology and Pathogenesis Program*

---

## PINT

A study of the effects of the integrase inhibitor, raltegravir, on viral reservoirs in those treated at primary HIV-infection compared to those treated during chronic infection.

**Status:** Two publications in 2012; further modelling of viral turnover in T-cell subsets commenced; extension phase analysis commenced.

**Personnel:** Anthony Kelleher, Linda Gelgor, Pat Grey, Kersten Koelsch, Christophe Boesecke, Sean Emery, Wendy Lee, Janaki Amin, David Cooper.

**Collaborators:** Robert Finlayson, Mark Bloch, Robert McFarlane, John Zaunders, Kat Marks, Kate McGhie, Julie Yeung, John Murray

**Funding:** Merck & Co Inc.

**Co-location:** *Therapeutic and Vaccine Research Program and Immunovirology and Pathogenesis*

---

## In vivo visualisation of epithelial surfaces by confocal endomicroscopy

This project intends to combine the development of laser scanning endomicroscopy with antibody reagents and fluorophores as tools for detection of disease markers in the gastrointestinal tract. This will provide us with tools to visualise biological processes in the real time and enable instant diagnosis for diseases such as inflammatory bowel disease.

**Status:** Preliminary studies in ex-vivo tissue have been conducted.

Standardised protocols were established for the in vivo assessment of mucosal barrier function by confocal endomicroscopy. Fluorescent labelling of *ex vivo* tissue has been optimised and a mouse model has been established for intravital imaging of the mucosal lining of the small intestine.

**Personnel:** Tri Phan, Mehreen Arshi, Mark Danta, Anthony Kelleher

**Collaborators:** Daniel Christ, Peter Delaney.

**Funding:** ARC Linkage Grant

---

## Characterisation of infection of follicular T helper cells during pathogenic SIV infection and HIV-1 infection

The aim of this project is to understand the fate and role of T follicular helper cells, a subset of memory CD4+ T cells which helps B cells to make high affinity, class-switched antibodies and to develop memory, during pathogenic SIV infection or HIV infection. Macaque T<sub>FH</sub> cells were phenotypically characterised from lymphoid tissues and sorted into pure population for SIV DNA quantification. Result shows that T<sub>FH</sub> cells were infected with SIV at similar levels as other memory CD4+ T cells, and despite infection, they accumulated during the chronic stage. Current focus is on the mechanisms for viral entry and T<sub>FH</sub> cell accumulation. Collaboration was also set up with a French group lead by Professor Brigitte Autran. T<sub>FH</sub> cells and other CD4+ T cell subsets were sorted in Paris and shipped to Sydney for confirmation of T<sub>FH</sub> cell infection with HIV in humans. Mechanism work will also be performed on T<sub>FH</sub> cells from healthy donors.

**Status:** Characterisation of infection of T<sub>FH</sub> cells in pathogenic SIV infection in pigtail macaques has completed with one publication in 2013. T<sub>FH</sub> cell infection with HIV-1 has been confirmed. We are now sequencing envelope gp120 from

---

different subsets, which will provide hints on coreceptor usage. Ethics approval has obtained to collect tonsillar tissues from healthy donors by Dr. Richard Harvey. Cells will be isolated for real-time phenotyping and functional assays, and stored for later studies.

**Personnel:** Yin Xu, Chris Weatherall, Michelle Bailey, Kazuo Suzuki, John Zaunders, Anthony Kelleher.

**Collaborators:** Rob de Rose, Rob Center, Stephen Kent, Brigitte Autran, Richard Harvey.

**Funding:** NHMRC Program Grant

---

## Primary HIV Infection Data Observational (PHIIDO)

This is a study of untreated individuals, designed to recruit and follow up a cohort of people with documented acute and early HIV infection, not going onto antiretroviral therapy, although patients may initiate antiretroviral therapy at any stage in consultation with their treating clinicians in accordance with current standard of care guidelines. There is also an aim to provide the clinical and laboratory framework to characterise immunological responses/viral events that occur early in the course of HIV infection in untreated subjects with a focus on factors that determine natural viral control. Subjects are adults identified with acute or early HIV infection, who do not intend to go on treatment at present. Analysis of factors associated with disease progression will be undertaken on an annual basis including, CD4 decline to <350 cells/mm, plasma levels of HIV-1 RNA, serial CD4/CD8 counts, meeting the criteria for initiation of ARV therapy, progression to AIDS or death.

**Status:** Study commenced in May 2009; 16 patients screened

**Personnel:** Pat Grey

**Collaborating centres:** St Vincent's Hospital, AIDS Research Initiative, East Sydney Doctors, Holdsworth House Medical Practice, Taylor Square Private Clinic and Albion St Clinic

---

## Role of miRNA in disease progression

miRNAs are a relatively recently described mechanism of regulating and fine-tuning mRNA and protein production. Their role in determining outcomes of HIV infection is poorly understood. This study is designed to identify new targets for therapeutic intervention and to determine profiles of miRNAs in groups of patients with disparate clinical outcome

**Status:** Ongoing

**Personnel:** Sanjay Swaminathan,

---

Chansavath Phetsouphan, Yin Xu, Laura Cook, Daniel Murray, Chantelle Hood, Nabila Seddiki, Kazuo Suzuki, John Zaunders

**Collaborating centres:** Long-Term Non-progressor Study Group; Faculté Créteil Henri Mondor, Créteil France; University of Canberra; St Vincent's Hospital, Sydney; Garvan Institute

**Funding:** NHMRC

---

## Role of ADCC in disease progression

Antibody dependent cytotoxicity is a mechanism by which natural killer cells kill infected cells. Its role in control of HIV-infection and in preventing HIV infection post vaccination is unclear. It is mediated by certain isotypes of IgG. This study will define quantity and quality of ADCC responses in various patient groups and look for correlations with control. Studies are being undertaken with collaborators in Melbourne and Perth to determine correlates of progression and unique epitopes.

**Status:** Samples on all LTNP and untreated patients at primary infection with varying rates of progression have been transferred to Melbourne and Perth for conduct of assays. Manuscript reporting results in LTNPs and rapid progressors has been submitted for publication.

**Personnel:** Anthony Kelleher, Pat Grey, Ansari Shaik, David Cooper, Kat Marks.

**Collaborating centres:** Long-Term Non-progressor Study Group, including clinical sites in Sydney, Port Kembla, Canberra, Brisbane and Melbourne; St Vincent's Hospital, Sydney; Department of Immunology and Infectious Diseases, Melbourne University; Department of Immunology, Royal Perth Hospital.

---

## Immuno-phenotyping of T-cell subsets

Many of Kirby Institute's clinical trial and natural history protocols involve immunological sub-studies. The laboratory supports these sub-studies as a semi-routine service. Performance of intensive assays has been undertaken as part of the PINT and CORAL studies, including analysis of stem cells. Several novel assays have been developed with new insights into pathogenesis.

**Status:** The CORAL study was completed in 2010.

**Personnel:** Mee-Ling Munier, Michelle Bailey, Chansavath Phetsouphanh, Yin Xu, Anthony Kelleher, Denise Hsu, Laura Cook, Will Hey-Cunningham, Kersten Koelsch, John Murray, John Zaunders.

**Collaborating centre:** St Vincent's Hospital, Sydney

**Funding:** Project-specific grants

---

## Immunopathogenesis of immune reconstitution disease

Studies of the immunopathogenesis of immune reconstitution disease (IRD) based on the samples studied ex vivo from patients suffering this disease. This study is exploring the causes of this dysregulation, with particular focus on the role of T regulatory cells. Studies commenced in 2006 and were formalised to recruit all patient-commencing CART late in the disease with a natural history study called PrIRIS. Analysis of assays performed real time elucidating the phenotype (eight flow cytometry panels) at intracellular cytokine secretion and at antigen-specific regulatory and effector T-cells.

**Status:** Data analysis is ongoing and cryopreserved samples are being used for immunopathogenesis studies.

**Personnel:** Anthony Kelleher, Chansavath Phetsouphanh, Denise Hsu, Mee-Ling Munier, David van Bockel, Sarah Pett, Nabila Seddiki

**Collaborating centres:** St Vincent's Hospital, Sydney; Faculté Créteil Henri Mondor, Créteil

**Funding:** NHMRC

---

## JUSTICE HEALTH RESEARCH PROGRAM 2012 STUDIES

---

### National Prison Entrants' Bloodborne Virus Survey (NPEBVS) 2010

The NPEBVS is conducted triennially and involves screening a consecutive national sample of prisoners entering the correctional system in Australia. The survey screens for HIV, hepatitis B, hepatitis C, chlamydia, gonorrhoea, and syphilis. A short behavioural risk factor questionnaire collects information on demographic characteristics, drug use, injecting practices, tattooing, tobacco smoking, and sexual health.

**Status:** Completed latest iteration in 2010; 2013 version being planned.

**Personnel:** Tony Butler  
Project steering committee: Tony Butler (Kirby Institute), Michael Levy (ACT Corrections Health); Devon Indig (Justice Health NSW); Kiah McGregor, Simon Stafford, and Robyn Hopkins (NT Correctional Services); Alun Richards and Stacy Kambouris (Queensland Health); Peter Frost and Karen Harlin

(SA Prison Health Service); Chris Wake and Deborah Siddall (Tasmania Correctional Primary Health Services); Fiona MacFarlane and Michele Gardner (Justice Health Victoria); and Holly Beasley (WA Corrective Services).

**Collaborating centres:** ACT Corrections Health; Justice Health NSW; NT Correctional Services; Queensland Health; SA Prison Health Service; Tasmania Correctional Primary Health Services; Justice Health Victoria; WA Corrective Services.

**Funding:** State and Territories governments contributions.

---

### REINVEST: Reducing impulsive behaviour in repeat violent offenders using a Selective Serotonin Reuptake Inhibitor (the REINVEST study)

Serotonergic dysfunction in the brain has been linked to impulsivity and impulsive behaviour has been linked to offending behaviour, particularly violent offending. This randomised control trial examines whether treatment with a class of antidepressant medication known as a selective serotonin reuptake inhibitor (SSRI) is effective in reducing impulsivity, and hence offending behaviour, in repeat-violent offenders in New South Wales.

**Status:** planning underway

**Personnel:** Tony Butler, Lee Knight; Peter Schofield (Hunter New England Health), David Greenberg (Justice Health NSW), Don Weatherburn (NSW Bureau of Crime Statistics and Research), Kay Wilhelm (St Vincent's Hospital), Vaughan Carr (Schizophrenia Research Institute), Catherine D'Este (Newcastle University), Phil Mitchell (University of New South Wales), Alison Jones (University of Wollongong); Tony Keech (Sydney University), Val Gebiski (University of Sydney); Rodney Scott (University of Newcastle); Jocelyn Jones (National Drug Research Institute), Luke Grant (Corrective Services NSW), Carolyn Dixon (Justice Health NSW), Alison Churchill (CRC Justice Support), Steven Allnutt (Justice Health NSW), Andrew Ellis (Justice Health NSW)

**Collaborating centres:** Corrective Services NSW; Justice Health NSW; Hunter New England Health; UNSW Psychiatry; Schizophrenia Research Institute; Newcastle University; NHMRC Clinical Trials Centre; Bureau of Crime Statistics and Research; University of Wollongong.

**Funding:** NHMRC Partnership Grant; NSW Health Department Funding.

---

## HePaTO: Hepatitis C, Prison, and Treatment Opportunities

Few prisoners report receiving treatment for hepatitis C in prison. The aims of HePaTO are to identify cultural and systemic barriers to providing treatment for Indigenous and non-Indigenous prisoners during incarceration in Australia, to estimate the potential number of prisoners who could be treated for chronic hepatitis C in prisons in Australia, and to evaluate the potential economic impact of treating chronic hepatitis C in prison.

**Status:** Qualitative interview completed. Modelling component underway

**Personnel:** Tony Butler, Lorraine Yap; Susan Carruthers (National Drug Research Institute, Curtin University); Wendy Cheng (Royal Perth Hospital); Sandra Thompson (Combined Universities Centre for Rural Health, University of Western Australia); Jocelyn Jones (National Drug Research Institute, Curtin University)

**Funding:** NHMRC Project Grant

---

## Does traumatic brain injury (TBI) lead to offending behaviour?

Rates of reported past TBI within offender and prisoner populations are extraordinarily high and it has been suggested that TBI may be responsible for up to half of all crimes leading to incarceration. Our study is designed to rigorously examine this question using high quality linked data, adopting a whole of life-time approach. Should a relationship between TBI and subsequent offending be established, this will open up the possibility of developing effective interventions to prevent this trajectory.

**Status:** Analysis underway

**Personnel:** Tony Butler, Basil Donovan, Lorraine Yap, Juliet Richters (SPHCM); Luke Grant (Corrective Services NSW); Alun Richards (Queensland Health)

**Collaborating centres:** Justice Health NSW; Corrective Services NSW; Queensland Health; National Centre in HIV Social Research

**Funding:** NHMRC Project Grant

---

## Broome to Berrima: building capacity Australia wide in Indigenous offender health research

Australia has one of the highest Indigenous incarceration rates in the OECD which impacts profoundly on indigenous communities. With offender populations known to endure a greater

health burden compared with the general community, there is a need to develop knowledge in this area, particularly in relation to Indigenous incarceration.

This project sees indigenous and non-Indigenous academics from Western Australia, the ACT, New South Wales and Victoria develop offender health research capacity within a team of indigenous and non-Indigenous investigators.

Investigators work on collaborative projects in the areas of mental health, substance use, blood-borne viruses, impact of incarceration on indigenous communities, and models of care for indigenous offenders.

**Status:** Ongoing.

**Personnel:** Tony Butler, John Kaldor, Kay Wilhelm, Michael Doyle, Megan Williams, Paul Simpson, Lise Lafferty

**Collaborating centres:** National Centre for Indigenous Studies (Australian National University); National Drug and Alcohol Research Institute (Curtin University); Winnunga Nimmityjah Aboriginal Health Service (ACT)

**Other investigators:** Michael Levy, Mick Dodson, Fadwa Al-Yaman, Dennis Gray, Steve Allsop, Jocelyn Jones, Jill Guthrie, Nerelle Poroch, Dina Saulo

**Funding:** NHMRC

---

## Strengthening China's response to HIV, TB and HIV/TB co-infection in labour camps (*lao jiao suo*) in a southwestern China region

The aim of the study is to describe the health status of detainees in re-education-through-labour-camp and identify through self-reported questionnaires their level of HIV and TB knowledge, risk behaviours, and health management of men and women in labour camp settings.

**Personnel:** Lorraine Yap, Tony Butler, Zunyou Wu (China National Center in AIDS and STD Control and Prevention), Liu Wei (Guangxi CDC), Chen Yi (Guangxi CDC); Lei Zhang, Joanne Reekie

**Collaborating centres:** China National Center in AIDS and STD Control and Prevention, Guangxi Provincial Centre for Disease Control (Department of AIDS Control and Prevention), Re-education-Through-Labour Administration in the region

**Funding:** AusAID Development Research Award

---

## Alcohol and other drug interventions in Australian prisons for Indigenous men

73% of Indigenous people entering prison had used alcohol at levels harmful

to their health in the 12 months prior to their imprisonment. Alcohol has also been implicated as a major contributing factor to the high levels of Indigenous imprisonment, with Indigenous Australians only comprising about 2.5% of the general population but around 20% of the prison population nationally. This project investigated what alcohol and other drug rehabilitative programs exist in Australian prisons for Indigenous men. This research explored gaps in services provision and it is hoped that further work will look at how these gaps can be addressed.

**Status:** Complete.

**Personnel:** Michael Doyle, Colleen Fishers, Sherry Sagers, Tony Butler

**Collaborating centres:** The University of Western Australia's School of Population Health, National Drug Research Institute (Curtin University)

**Funding:** This project was funded as part of the NHMRC capacity building grant

---

## Reducing Australia's Aboriginal prisoner population through 'Justice Reinvestment': assessing the public's views on imprisonment versus non-imprisonment alternatives for offenders using Citizens' Juries

Justice Reinvestment has been gaining attention among Indigenous, health and offender advocates and is touted as a possible solution to Indigenous over-representation in Australia's criminal justice system. This project seeks to determine, through 'Citizens' Juries', the opinions and views of a critically informed public towards alternatives to incarceration. It also examines whether policy makers are influenced by the opinions and views of the Citizens' Juries.

**Status:** Ongoing.

**Personnel:** Tony Butler, Paul Simpson, Michael Doyle, Jill Guthrie, Jocelyn Jones

**Collaborating centres:** National Centre for Indigenous Studies (Australian National University); National Drug and Alcohol Research Institute (Curtin University)

**Project Funding:** Lowitja Institute

---

## PUBLIC HEALTH INTERVENTIONS RESEARCH GROUP 2012 STUDIES

---

### Young Women's Reproductive Health Study

This is a nationally representative survey of young women designed to obtain population-based information on human

papillomavirus vaccination coverage, prevalence of genital warts and genital chlamydia and other issues pertinent to young women's reproductive health such as pregnancy and contraception.

**Status:** Recruitment underway and analysis underway.

**Personnel:** Bette Liu, John Kaldor, Basil Donovan, Julia Brotherton, Marion Saville

**Collaborating centres:** Victorian Cytology Service; National HPV Vaccination Register

**Funding:** NHMRC Program Grant, Victorian Cytology Service

---

## Notifiable Diseases and Reproductive Health

This project uses data linkage in NSW to examine the effects of commonly notified diseases including sexually transmitted infections and blood borne viruses on reproductive health outcomes in women.

**Status:** Recruitment completed and analysis underway.

**Personnel:** Bette Liu, Louisa Jorm, Christine Roberts, John Kaldor, Rebecca Guy, Basil Donovan, Joanne Reekie

**Collaborating centres:** University of Western Sydney; Kolling Institute University of Sydney

**Funding:** NHMRC Post-doctoral fellowship; NHMRC Program Grant

**Co-located:** *Public Health Interventions Research Group and Sexual Health Program*

---

## Identifying predisposing factors for, and the consequences of, common and emerging infectious diseases

This project will involve using the 45 and Up Prospective cohort study and data linkage to examine what factors may predispose adults to certain infections and what the longer term consequences of infections are on health outcomes and health service utilisation.

**Status:** Analyses underway.

**Personnel:** Bette Liu, John Kaldor, Emily Banks

**Collaborators:** Sax Institute; Australian National University

**Funding:** Ramaciotti Foundation

---

## A bibliometric analysis of research capacity building in HIV in low-income countries

Many international health research programs aspire to the twin goals of acquiring new scientific knowledge and the building of research capacity in the institutions and workforce of

developing country partners. While there is no standard approach to measuring research capacity, bibliometrics has been used in a number of developing country settings. We aimed to assess the change in research capacity over time, through a ten year analysis of trends in authorship positions and predictors of authorship.

**Status:** analysis underway

**Personnel:** Skye McGregor, John Kaldor, Klara Henderson

**Funding:** Nil

---

## Predictors of research involvement for developing country UNSW Public Health research graduates

Research in Masters and Doctoral degrees are pathways to understanding methods and the role of research. As a consequence of limited graduate education opportunities in developing countries, students in these countries tend to complete studies overseas. The question is whether these students go on to have careers in research, and contribute to the research capacity of their countries. Our aim is to describe the characteristics of UNSW public health research graduates, to measure their research output and to analyse predictors of research involvement.

**Status:** Ongoing

**Personnel:** Skye McGregor, John Kaldor, Klara Henderson, Joanne Travaglia

**Collaborating centre:** School of Public Health and Community Medicine

**Funding:** Nil

---

## Field Research Training Program, HIV Consortium for Partnerships in Asia and the Pacific

The Field Research Training Programme (FRTP) aims to build clinical and epidemiological HIV research capacity in Cambodia and Indonesia through training of researchers in the following areas: longitudinal research design, conduct and analysis; engagement with government and affected communities as research partners; research funding submissions; and the dissemination of research findings to inform policy. The content and structure of the FRTP are flexible and tailored to suit trainees, their institutions and country needs. The FRTP was established as part of the AusAID-funded *HIV Consortium for Partnerships in Asia and the Pacific*.

**Status:** Ongoing

**Personnel:** Louise Causer, John Kaldor, Bradley Mathers, Skye McGregor, Janaki Amin, Kathy Petoumenos

**Collaborating centres:** National Centre for HIV/AIDS, Dermatology and STD (NCHADS), Phnom Penh, Cambodia; School of Public Health, Udayana University (UU), Bali, Indonesia; Faculty of Medicine, Universitas Gadjah Mada, (UGM), Yogyakarta, Indonesia

**Funding:** AusAID

---

## Scabies - Factors associated with scabies in a highly endemic population

Scabies is a major cause of morbidity in many developing countries, leading to economic disadvantage and reduced quality of life. This project addresses the problem of scabies control in high prevalence countries, through the investigation of the efficacy of two alternative mass drug administration (MDA) regimens in Fiji compared to the current standard of care, which centres on treatment of asymptomatic cases and their direct contacts. This study has three main objectives: to characterise the participants in a Fiji community survey of scabies; to identify environmental and demographic risk factors for scabies in Fiji; and to provide information on possible preventative measures for scabies.

**Status:** currently recruiting

**Personnel:** John Kaldor, Lucia Romani, Handan Wand, Andrew Steer, Margot Whitfield, Ross Andrews, Hla Hla Thein, Josefa Koroivueta, Lisi Tikoduadua, Timothy Furlong, Apisolome Nakolinivalu, Eric Rafai, Meciusela Tuicakau

**Collaborating centres:** Murdoch Children's Research Institute, Menzies School of Health Research, Fiji Ministry of Health, St Vincent's Hospital  
**Funding:** NHMRC Project Grant

---

## Women's and men's experiences of preventing mother-to-child transmission (PMTCT) in Papua New Guinea: a gendered socio-cultural analysis of barriers and facilitators for program engagement

PNG is experiencing an expanding heterosexual HIV epidemic, placing an increasing number of newborns at risk of acquiring infection. This research seeks to understand the gendered socio-cultural aspects influencing the uptake and outcomes of PMTCT programs from the perspectives of antenatal women, their partners, and health care workers. It seeks to: undertake an assessment of PMTCT programs; examine knowledge,

attitudes and decision-making processes regarding PMTCT; test enablers of return for safe delivery and post-natal care; examine experiences of consent, counselling and confidentiality; determine gender-specific barriers/facilitators to accessing PMTCT programs; and develop recommendations for improved PMTCT programs.

**Status:** 168 interviews were conducted with women, men and key informants. Seventy-eight HIV-positive women took part in in-depth interviews (IDIs). Of these, twenty-four were interviewed three times, sixteen twice and thirty-eight once. Twelve HIV-negative women underwent one IDI. Eighteen men whose wives had undergone HIV testing were interviewed. Of these, one was interviewed three times, nine twice and seven once. Twenty-eight Key Informant Interviews (KIIs) were also conducted.

**Personnel:** John Kaldor, Heather Worth, Angela Kelly, Martha Kupul, Lisa Vallely, Ruthy Neo, Voletta Fiya, Grace Karawiga, Glen Mola

**Collaborating centres:** PNG Institute of Medical Research; University of Papua New Guinea; Port Moresby General Hospital; UNICEF PNG; International HIV Research Group, UNSW

**Funding:** AusAID Australian Development Research Award

---

### **MCAIS: Male Circumcision Acceptability & Impact Study, PNG**

This four-year multi-disciplinary community-based research program is investigating the potential of male circumcision for HIV prevention in Papua New Guinea and has four principal components: ethnographic research; mathematical modelling; health systems research; and longitudinal clinical cohort studies. The study is being carried out among a combination of general and at-risk population cohorts at multiple sites in PNG. A sub-study to investigate the notional acceptability of a vaginal microbicide surrogate for HIV prevention among women and men attending a sexual health clinic in Port Moresby was completed in 2010. MCAIS jointly organised a national policy forum on male circumcision for HIV prevention in PNG, which was held in Port Moresby in November 2011 with the purpose of translating research evidence into public health policy and practice. The forum made three key recommendations: (1) the formation of a joint NDoH/NACS Policy Committee on Male Circumcision; (2) the establishment of an integrated harm reduction program; and (3) that

future policy on wide scale roll-out of MC for HIV prevention in PNG be informed by a combination of (a) data from MC intervention pilot programs and (b) formative research on the potential protective effect of other forms of penile cutting. The MCAIS group has been asked to take a lead role in these future research activities and will be leading these new activities from 2013 onwards.

**Status:** Complete.

**Personnel:** Andrew Vallely, John Kaldor, John Murray, David Wilson, Richard Gray, Peter Siba, Angela Kelly, Claire Ryan, Martha Kupul, Herick Aeno, Voletta Fiya, James Neo, Richard Naketrumb, Greg Law, Petronia Kaima, Zure Kombati, Joyce Sauk, Joyce Allan, Pamela Toliman, Liza Fitzgerald, Peter Hill, Anna Tynan, John Millan.

**Collaborators:** PNG Institute of Medical Research; Mt Hagen General Hospital, PNG; HOPE Worldwide, PNG; University of Queensland, Australia; The Burnet Institute, Melbourne.

**Funding:** AusAID Australian Development Research Award (ADRA)

---

### **Qualitative longitudinal study to investigate constructions of masculinity, sexuality and agency among male youth in Papua New Guinea (NACS Masculinities Study, PNG)**

This two-year multi-disciplinary community-based research program will investigate the role that individual, community and cultural constructs of masculinity, male sexuality and sexual agency have in determining sexual behaviour among young men in PNG, and specifically, their role in promoting behaviours known to increase the risk of HIV and STIs among men and women. The study will be conducted in Eastern and Western Highlands Provinces, PNG where 50 to 60 in-school and out-of school male youth aged 16-17 years will be recruited into a qualitative longitudinal research study and followed up every three months for up to 18 months. This research addresses a clear gap in current knowledge about masculinities and male sexuality in the context of the HIV epidemic in PNG. It will provide information vital to evidence-based public health policy development. The study is also expected to directly inform the implementation of new national programs designed specifically to address male sexual and reproductive health

**Status:** Qualitative longitudinal study among male youth in rural Eastern

Highlands Province commenced February 2012 and is on-going. Photo-voice activity conducted in December 2012 is expected to lead to an interactive photographic exhibition in-country and in Australia in 2013.

**Personnel:** Andrew Vallely, John Kaldor, Angela Kelly, Lee Wilson, Lisa Fitzgerald, Peter Siba, Maxine Whittaker, Agnes Mek, Herick Aeno, John Millan, Joyce Sauk, Richard Naketrumb, Zure Kombati.

**Collaborators:** PNG Institute of Medical Research, University of Queensland.

**Funding:** National AIDS Council Secretariat, Papua New Guinea (NACS)

---

### **The epidemiology of sexually transmitted infections, including human papillomavirus, among pregnant women attending antenatal clinics at four sites in Papua New Guinea (STIs in Pregnancy Study, PNG)**

An estimated 1500 women die every year in PNG due to cervical cancer. Despite this disease burden, no large-scale surveys have been conducted to establish the prevalence of HPV among general or at-risk populations of women. This study will investigate the epidemiology of sexually transmitted infections, including human papillomavirus (HPV), HIV and herpes simplex type-2 (HSV-2) among 1000 women attending antenatal clinics in four provinces in PNG. It will provide the first general population level estimates of HPV type prevalence and is expected to inform future policy on HPV vaccination and cervical cancer prevention in PNG.

**Status:** Ethical clearance and clinical site preparation completed December 2011; study recruitment started February 2012. At the end of 2012, 227 study participants had been recruited at two sites.

**Personnel:** Andrew Vallely, Claire Ryan, John Kaldor, Handan Wand, Peter Siba, Greg Law, Petronia Kaima, Zure Kombati, Joyce Sauk, Sandra Yamuwe, Lisa Vallely, Glen Mola, Nola N'drewei, Sepehr Tabrizi

**Collaborators:** PNG Institute of Medical Research; National Department of Health, PNG; The Burnet Institute, Melbourne; Royal Women's Hospital, Melbourne.

**Funding:** PNGIMR ICRAS Program / AusAID PNG

---

### **Human papillomavirus infection among women attending sexual health clinics in Mt Hagen, Goroka and Port Moresby, Papua New Guinea (HPV Study PNG)**

This study will investigate the epidemiology of human papillomavirus (HPV) and other sexually transmitted infections among women attending sexual health clinics in three provinces in PNG. It will provide the first estimates of HPV type prevalence among women at increased risk of HIV/STI acquisition in PNG and is expected to inform future policy on cervical cancer screening and prevention.

**Status:** Currently recruiting.

**Personnel:** Andrew Vallely, Claire Ryan, John Kaldor, Handan Wand, Peter Siba, Greg Law, Petronia Kaima, Zure Kombati, Joyce Sauk, Sandra Yamuwe, Glen Mol, Nola N'derewei, Sepehr Tabrizi

**Collaborators:** PNG Institute of Medical Research; National Department of Health, PNG; HOPE Worldwide, PNG; Mt Hagen General Hospital; Save the Children in PNG; The Burnet Institute, Melbourne; Royal Women's Hospital, Melbourne

**Funding:** AusAID PNG

### **Cervical cancer screening using visual inspection with acetic acid (VIA) and its relationship to cervical cytology and high-risk human papillomavirus (HR-HPV) infection among women attending Well Woman Clinics in Papua New Guinea (VIA Study PNG)**

This study will investigate: the prevalence of VIA-detectable cervical abnormalities; cervical intraepithelial dysplasia; high-risk human papillomavirus (HR-HPV) infection; and the behavioural and biological determinants associated with risk, among women attending Well Woman Clinics in Eastern and Western Highlands Provinces, PNG. The study will determine the acceptability and operational feasibility of VIA plus cryotherapy ('test and treat') as an intervention for cervical cancer screening and treatment among urban and rural populations in PNG, and is being conducted in order to inform future national policy on cervical cancer screening.

**Status:** Currently recruiting.

**Personnel:** Andrew Vallely, Claire Ryan, John Kaldor, Glen Mola, Antonia Kumbia, Benny Kombuk, Handan Wand, Lisa Vallely, Angela Kelly, Joanne Goyen, Phillip Baird, Greg Law, Peter Siba

**Collaborating centres:** PNG Institute of Medical Research, National Department of Health, PNG, Mt Hagen General Hospital, Goroka General Hospital, MeriPath PNG; The Burnet Institute, Melbourne

**Funding:** AusAID PNG

### **Meanings and beliefs of cervical cancer, its causation, prevention and treatment in Papua New Guinea**

Cervical cancer is the most common cancer among women in PNG and a leading cause of premature death. Despite this disease burden, no research to date has been conducted to investigate traditional and contemporary socio-cultural contexts, meanings and understandings of cervical cancer causation, prevention and treatment in PNG. This mixed-method qualitative study will investigate socio-cultural contexts of cervical cancer in Papua New Guinea in order to inform future national prevention and care strategies, including HPV vaccination and cervical screening programs.

**Status:** Study conducted in Unggai Bena District, August-October 2012 with remaining sites to be completed by July 2013.

**Personnel:** Andrew Vallely, John Kaldor, Angela Kelly, Voletta Fiya, Priscilla Ofi, Herick Aeno, Glen Mola, Antonia Kumbia, Benny Kombuk, Alex Golpak, Lisa Vallely, Jane Jones, David Wood, Peter Siba.

**Collaborators:** PNG Institute of Medical Research, National Department of Health, PNG, Mt Hagen General Hospital, Goroka General Hospital, Kimbe Hospital

**Funding:** AusAID PNG

### **HIV prevalence, predictors of infection, and effective interventions for female sex workers in Vietnam**

Recent increases in prevalence among key risk populations in Vietnam, particularly FSW, have prompted the government and HIV donor community to launch new initiatives, but in a period of donor funding decline for HIV programs in Vietnam. Evidence-based planning is critically needed at this transitory stage of HIV prevention programming. This research helps fill the epidemiologic data gap on FSW, investigates barriers and incentives for FSW enrolment and retention in longitudinal studies, and evaluates the effectiveness of new interventions in reducing HIV risks among FSW. This is a combination of cross-sectional, prospective cohort and ethnographic studies characterising the HIV epidemic among female sex workers (FSW) in Vietnam and evaluating HIV interventions for FSW in Ho Chi Minh City.

**Status:** ongoing

**Personnel:** Linh-Vi Le, John Kaldor, Lisa Maher, Keith Sabin

**Collaborating centres:** World Health Organization, UNAIDS, CDC Vietnam

**Funding:** U.S. President's Emergency Plan for AIDS Relief

### **A survey and follow-up study to assess research capacity building of developing country attendees of the 2012 International Microbicides Conference (M2012)**

It is commonly accepted that attendance at international research conferences facilitates exposure to new research ideas, methodologies, and researchers. For developing country attendees, it could reasonably be assumed that this would contribute to the development of research capacity of individuals. Surveys of research attendees are common, but largely relate to the assessment of quality of the conference. A web based survey distributed to developing country attendees of M2012. Data is collected on education, current research involvement, and research activity in the twelve months following M2012.

**Status:** Ethics approval was granted in March 2012, the first survey was distributed in May 2012, the first follow up in October 2013, with the final survey to be distributed in April 2013

**Personnel:** Skye McGregor, John Kaldor, Klara Henderson

**Funding:** n/a

### **Mobile men with money: the role of mining development on sexual health risks among landowners**

A qualitative study to examine the role of mining development on sexual health risks among landowners, their sexual partners and others affected by resource extraction development, in order to improve the health outcomes of Papua New Guineans. This study will examine the impact of development, mobility, and income remittance on sexual health risk and vulnerability for Papua New Guineans, particularly landowners and their sexual partners in the selected LNG project affected areas, and identify strategies and points of entry for sexual health impact mitigation.

**Status:** Currently recruiting

**Personnel:** Andrew Vallely, Angela Kelly, Roselyn Siki, Richard Naketrumb, Priscilla Ofi, Michael Moses, Heather Worth, Richard Eves

**Collaborating centres:** PNG Institute of Medical Research; International HIV Research Group, University of New South Wales, Sydney; Australian National University, Canberra

**Funding:** PNGIMR ICRAS Program

---

## HIV, tuberculosis, sexually transmitted infections and blood borne viruses in prison populations in Papua New Guinea

A longitudinal clinical cohort study to investigate the prevalence and risk factors associated with HIV, tuberculosis, sexually transmitted infections and blood borne viruses in prison populations in Papua New Guinea. This study will estimate the prevalence of HIV, tuberculosis (TB), sexually transmitted infections (STIs), and blood borne viruses (BBVs) among new prisoners on admission to Bomana Prison, National Capital District, Papua New Guinea; and determine the behavioural and socio-cultural factors associated with risk of infection.

**Status:** Currently recruiting

**Personnel:** Andrew Vallely, Bradley Mathers, Tony Butler, John Kaldor

**Collaborating centres:** PNG Institute of Medical Research; National Department of Health, Waigani; Department of Correctional Services, Boroko; The Burnet Institute, Melbourne; University of Western Australia, Perth

**Funding:** PNGIMR ICRAS Program

---

## Drugs and HIV risk in prisons in PNG

An assessment of HIV risk in relation to alcohol and other drugs (particularly injecting) and HIV risk in prisons and access to prevention, treatment and care. This study investigated the risks for HIV associated with illegal drugs, particularly injecting drugs and in closed settings, HIV risk and access to HIV prevention, treatment and care.

**Status:** Currently recruiting

**Personnel:** Bradley Mathers, Andrew Vallely, Angela Kelly, Thomas Kawage

**Collaborating centres:** PNG Institute of Medical Research

**Funding:** UNAIDS/UNODC

---

## Gonococcal resistance in Papua New Guinea

The prevalence and mechanisms of gonococcal resistance to antimicrobial compounds in Papua New Guinea. Gonorrhoea is a sexually transmitted infection (STI) caused by the bacteria *Neisseria gonorrhoeae* (Ng). Gonorrhoea is an important public health issue for PNG, as reported infection rates are high (131 per 100,000), and infection can result in a range of pathologies including urethritis in men, endocervicitis,

infertility and pelvic inflammatory disease in women, eye infection in neonates, and has been reported to potentiate the transmission of HIV. Standard treatment for gonorrhoea in PNG is amoxicillin-clavunate, however Ng strains that are resistant to this and other antibiotics are becoming increasingly prevalent in the Asia-Pacific region, raising concern that resistant strains may also be circulating in PNG.

**Status:** currently recruiting

**Personnel:** Andrew Vallely, Johanna Wapling, Mitton Yohannes, Pamela Toliman, Sylvia Soso, Matthew David, Claire Ryan, Andrew Greenhill, Zure Kombati, Greg Law, David Whiley

**Collaborating centres:** PNG Institute of Medical Research; Mt Hagen General Hospital; National Department of Health, Waigani; Burnet Institute, Melbourne;

Monash University, Melbourne;

University of Queensland, Brisbane

**Funding:** PNGIMR ICRAS Program

---

## Genital infections in Papua New Guinea

To determine the contribution of bacterial vaginosis and *Candida albicans* to vaginal discharge syndrome and vulva irritation in women attending a sexual health clinic in Goroka, Papua New Guinea. The aim of this study is to determine the contribution of bacterial vaginosis and *C. albicans* to vaginal discharge syndrome and vulva irritation in PNG women attending a sexual health clinic in Goroka.

**Status:** Ethical approvals obtained July 2012; specialist training for study PI completed in Melbourne, September 2012; participant enrolment to start April 2013.

**Personnel:** Andrew Vallely, Nola N'Drewe, Claire Ryan, Johanna Wapling, Alson Akege'e, Catriona Bradshaw

**Collaborating centres:** PNG Institute of Medical Research; Michael Alpers Clinic, Goroka Provincial Hospital; Burnet Institute, Melbourne; Melbourne Sexual Health Centre, Melbourne

**Funding:** PNGIMR ICRAS Program

---

## Immuno-Histological correlates of protection from HIV transmission by male circumcision and other forms of penile cutting

This study will test the hypothesis that alternative forms of penile cutting may be protective against HIV infection among men in Papua New Guinea and investigate immuno-histological

correlates of protection it will be conducted as part of a male circumcision intervention being provided on-campus to students enrolled at Pacific Adventist University in Port Moresby.

**Status:** Currently recruiting

**Personnel:** Andrew Vallely, John Kaldor, Stuart Turville, John McBride, Mangalaliri Jayathunge, Tom Hope, Minh Dinh, David MacLaren, Peter Siba, Claire Ryan, Paul Horwood, Rachael Tommbe

**Collaborating centres:** PNG Institute of Medical Research; National Department of Health, Waigani; Pacific Adventist University, Port Moresby; James Cook University, Cairns; The Burnet Institute, Melbourne; Feinberg School of Medicine, Northwestern University, Chicago

**Funding:** National AIDS Council, PNG

---

## The protective effect of dorsal longitudinal slit of the foreskin against HIV acquisition in men in Papua New Guinea

This prospective study will investigate the protective effect of dorsal longitudinal slit of the foreskin against HIV acquisition in men in Papua New Guinea. Male circumcision (MC) has been shown in large-scale clinical trials in Africa to have a protective efficacy of around 60% in preventing HIV acquisition in heterosexual men, confirming earlier observational and ecological studies, and resulting in a recommendation by WHO/UNAIDS in 2007 that MC be considered an essential component of comprehensive HIV prevention in high prevalence settings. Dorsal longitudinal slit of the foreskin ('dorsal slit') appears to be the most common form of contemporary penile cutting in PNG and was reported by 47% of men in a large cross-sectional survey conducted in four provinces in 2010-11.

**Personnel:** Andrew Vallely, John Kaldor, Handan Wand, David MacLaren, Rachael Tommbe, Angela Kelly, Claire Ryan, John McBride, Peter Siba, Lalen Simeon, Clement Manineng, Kel Browne, Petronia Kaima, Zure Kombati, Greg Law, John Millan, Peter Hill

**Collaborating centres:** PNG Institute of Medical Research; National Department of Health, Waigani; Pacific Adventist University, Port Moresby; Divine World University, Madang; James Cook University, Cairns; The Burnet Institute, Melbourne; University of Queensland, Brisbane

**Funding:** National AIDS Council, PNG

---



---

## An investigation of health workers understanding of syphilis testing in PNG

Knowledge, attitudes and practices (KAP) survey among health workers in government, non-government and faith-based health care facilities in 10 provinces in PNG. Informants completed short interview based questionnaire to assess their understanding of syphilis testing, diagnosis and treatment. Information also captured on the level of training health workers received regarding the performance of syphilis rapid tests and the interpretation of results. The PNG Safe Motherhood/Obstetrics Group has approved the use of a TPHA syphilis rapid test in rural antenatal clinics (ANCs). Informal interviews indicate that health care workers (HCWs) have not been trained in the use of TPHA rapid tests, that there are differences in how much blood is used, and how long before results are being read.

**Status:** Ethical approval obtain January 2012. Interviews with over 50 health workers conducted in 11 provinces April – November 2012

**Personnel:** Andrew Vallely, Claire Ryan, Tawarot Kurumop, Justin Pulford, Jimmy Elliot, Greg Law

**Collaborating centres:** PNG Institute of Medical Research; Burnet Institute, Melbourne; National Department of Health, PNG

**Funding:** PNGIMR ICRAS Program

---

## Women's experiences of pregnancy and childbirth in Upper Bena, Unggai Bena District, Eastern Highlands Province, Papua New Guinea.

PNG has one of the highest maternal mortality ratios (MMR) in the world. This study will investigate the epidemiology of sexually transmitted infections, including human papillomavirus (HPV), HIV and herpes simplex type-2 (HSV-2) among 1000 women attending antenatal clinics in four provinces in PNG. It will provide the first general population level estimates of HPV type prevalence and is expected to inform future policy on HPV vaccination and cervical cancer prevention in PNG.

**Status:** Key informant interviews (KIIs) and recruitment of women into a longitudinal cohort started Jan 2012. Collection of health facility data relating to maternal health activities, follow-up interviews for women in the longitudinal cohort, and KIIs completed in May 2012.

**Personnel:** Andrew Vallely, Lisa Vallely, Primrose Homiehombo, Julie Liviko, Angela Kelly, Voletta Fiya, Andrew Whittaker, Caroline Homer

**Collaborating centres:** PNG Institute of Medical Research; Eastern Highlands Provincial Department of Health, PNG; University of Queensland, Brisbane; University of Technology, Sydney

**Funding:** PNGIMR ICRAS Program

---

## STIs among pregnant women in Papua New Guinea

The epidemiology of sexually transmitted infections, including human papillomavirus (HPV), among pregnant women attending antenatal clinics at four sites in Papua New Guinea. Papua New Guinea (PNG) has one of the highest rates of cervical cancer in the world with an estimated age-standardised incidence of 23.7/100,000 compared to 5.0/100,000 in Australia and New Zealand. Cervical cancer is the most common cancer among women in PNG and a leading cause of premature death. An estimated 1500 women die every year in PNG due to cervical cancer. Despite this disease burden, no large-scale surveys have been conducted to establish the prevalence of human papillomavirus (HPV) among general or at-risk populations of women.

**Status:** currently recruiting

**Personnel:** Andrew Vallely, John Kaldor, Handan Wand, Claire Ryan, Lisa Vallely, Suparat Phuanukoonon, Peter Siba, Glen Mola, Greg Law, John Millan, Glennis Rai, Sepehr Tabrizi

**Collaborating centres:** PNG Institute of Medical Research; National Department of Health, PNG; The Burnet Institute, Melbourne; Royal Women's Hospital, Melbourne

**Funding:** Papua New Guinea Partnership in Health Program (PNG PiHP)

---

## SEXUAL HEALTH PROGRAM STUDIES 2012

### Australian Chlamydia control effectiveness pilot (ACCEPT) study

Current national guidelines for general practitioners (GPs) recommend all sexually active people aged 15–29 years old receive annual testing for chlamydia. More than 80% of 15–29-year-olds attend a GP each year less however less than 10% are being tested for chlamydia by their GP. ACCEPT involves a multifaceted intervention in the GP setting to maximise testing rates and annual testing

in sexually active 16–29-year-olds to see if it can reduce the prevalence of chlamydia infections and its associated complications such as PID. This is the first trial of this nature in Australia and is being led by the Centre for Women's Health, Gender and Society at University of Melbourne in collaboration with a large consortium of experts including a number of researchers from the Kirby Institute. In addition, the Kirby Institute has been contracted to develop the protocol for program evaluation, conduct mathematical modelling, and assist with implementation.

**Status:** 52 Postcodes recruited and randomised. Intervention is underway.

**Personnel:** Rebecca Guy, John Kaldor, Basil Donovan, David Regan, David Wilson, Matthew Law, Rebecca Lorch, Lisa Edward, James Ward, Belinda Ford  
**Collaborators:** Jane Hocking, Meredith Temple-Smith, Jenny Walker, Simone Poznanski, Alaina Vaisey, Dyani Lewis, Jane Gunn, Christopher Fairley, Nicola Low, Marian Pitts, Marion Saville, Dorota Gertig, Sepehr Tabrizi, Margaret Hellard  
**Funding:** Australian Government Department of Health and Ageing Chlamydia Pilot Program. Further funding from NHMRC Project grant from 2011.

**Co-location:** *Sexual Health Program, Public Health Interventions Research Group, Biostatistics and Databases Program, Aboriginal and Torres Strait Islander Health Program*

---

### Australian Collaboration on Chlamydia Enhanced Sentinel Surveillance (ACCESS)

Chlamydia is the most commonly notified infection in Australia and is an important cause of pelvic inflammatory disease, ectopic pregnancy and tubal infertility in women. Chlamydia notifications have been increasing for over a decade. However, the basis of the increase is not well understood. The ACCESS program determines chlamydia testing and positivity rates in priority populations nationally also maintains an ongoing surveillance system.

Populations of interest include young heterosexuals, men who have sex with men, sex workers, pregnant women, and Indigenous people. The program involves national collaborative networks of selected services including sexual health clinics, antenatal clinics, Aboriginal Community Controlled Health Services, family planning clinics, general practices and laboratories.

**Status:** A number of peer-reviewed reports published.

**Personnel:** Basil Donovan, Rebecca Guy, Hammad Ali, John Kaldor, Andrew Grulich, James Ward, Handan Wand, David Wilson

**Collaborators:** Margaret Hellard, Caroline Van Gemert, Mark Stooove, Isabel Bergeri, Jane Goller, Fabian Kong, Anna Bowring, Elizabeth Sullivan, Zhuoyang Li, Wayne Dimech, Marcus Chen, Christopher Fairley, Catherine O'Connor, Bridget Dickson, Lewis Marshall, Tony Merritt, Jane Hocking, Marie Pirotta, Phyllis Lau Douglas Boyle, Helena Britt, Clare Heal, Tom Brett, Caroline Harvey, Robyn Wardle, Kathy McNamee, Lynne Jordan, Anne Stephens, Christine Read, Deborah Bateson, Deborah Wright, Mick Adams, Mark Saunders, Sophie Couzos, Jenny Hunt, Peter Waples-Crowe, David Scrimgeour, Sid Williams, Ana Herceg, Liz Moore, Michael Beckmann, Julie MacPhail, Marian Currie, Zena Robinson, Trent Miller, Megan Halliday, Paul Goldwater  
**Funding:** Funding is currently being sought from States and Territories' Health Departments and from the Department of Health and Ageing.  
**Co-location:** *Sexual Health Program, Public Health Interventions Research Group, Surveillance and Evaluation Program for Public Health, Biostatistics and Databases Program*

---

### Chlamydia incidence and re-infection study (CIRIS): a longitudinal cohort study of young Australian women

Chlamydia incidence and re-infection rates have never been studied in Australian women. We aimed to determine the incidence of chlamydia in a cohort of young women who initially screen negative, along with determining the re-infection rate of women who initially screen positive, in order to inform future population screening programs. This study involved the establishment of a cohort of young women attending a range of primary health care services who agreed to complete questionnaires and return self-collected vaginal swabs for testing. This study is lead by the Centre for Women's Health and Society at University of Melbourne. Further funding was obtained from the National Health and Medical Research Council extending this project to investigate the incidence of Bacterial Vaginosis (BV) and Mycoplasma genitalium within this cohort of women.  
**Status:** Final report published in PLoS one in 2012.

**Personnel:** Basil Donovan, John Kaldor

**Collaborators:** Jane Hocking, Jenny Walker, Christopher Fairley, Marcus Chen, Jane Gunn, Marie Pirotta, Veerakathy Harindra, Lyle Gurrin L, Kathy McNamee, Hudson Birken (University of Sydney); Frank Bowden, Sepehr Tabrizi, Suzanne Garland  
**Funding:** Australian Government Department of Health and Ageing Chlamydia Pilot Program; NHMRC  
**Co-location:** *Sexual Health Program and Public Health Interventions Research Group*

---

### Chlamydia re-test review

Repeat infection with *chlamydia trachomatis* following treatment is common and increases the risk of sequelae. Despite clinical guidelines recommending re-screening within three months of treatment, re-screening rates remains low. We undertook a systematic review to identify studies which compared rates of re-screening for repeat chlamydial infection between patients receiving and not receiving an intervention.

**Status:** Review accepted for publication in *Sexually Transmitted Infections*

**Personnel:** Rebecca Guy, Hammad Al, Basil Donovan, John Kaldor

**Collaborators:** Jane Hocking (University of Melbourne); Low Nicola (University of Bern, Switzerland); Bauer Heidi (California Department of Public Health); Jenny Walker (University of Melbourne) Jeffrey Klausner (University of California).  
**Funding:** Nil

**Location:** *Sexual Health Program*

---

### Chlamydia testing and management practices in Australian family planning clinics

Chlamydia is the most common reportable infection in Australia with over 80,000 cases reported in 2011. Chlamydia infection is associated with adverse health outcomes including pelvic inflammatory disease (PID), ectopic pregnancy, and tubal infertility. Chlamydia testing, contact tracing and retesting practices of clinicians are important foundations for early detection and prevention of chlamydia infections. The aims of this study are: to assess chlamydia testing, partner notification and retesting practices of clinicians at family planning clinics in Australia; to determine enablers and barriers to chlamydia testing, contact tracing and retesting; and to identify opportunities for training and support of clinicians and future interventions for

chlamydia prevention. This study was conducted at Family Planning Clinics in all states and territories of Australia and involved an online survey of clinicians' chlamydia testing and management practices. Following the survey, focus groups among family planning clinics' clinicians will be conducted to determine enablers and barriers to the testing and management of patients for chlamydia.  
**Status:** The study survey closed at the end of June, 2012 with an overall response rate of 79%. All of the focus groups (11 in total) have been completed. Preliminary data has been fed back to Family Planning Australia and individual clinic feedback is being put together.

**Personnel:** Joanne Micallef, Rebecca Guy, Larissa Lewis

**Collaborators:** Deborah Bateson (Family Planning New South Wales); Caroline Harvey (Family Planning Queensland); Julie Mooney-Somers (University of Sydney); Caroline Van Gemert (Burnet Institute)

**Co-location:** *Sexual Health Program and Public Health Interventions Research Group*

---

### Cost analysis of rapid HIV testing in sexual health clinics

This analysis will assess the costs of both conventional and rapid HIV testing in terms of test kits and laboratory equipment, staff time and other ancillary costs to allow a direct comparison. A decision tree analysis will be used to assess the possible impact of provision of conventional HIV results by telephone and avoiding a second clinic visit through rapid HIV testing on the costs of HIV testing for MSM. The study is designed to assess whether rapid HIV testing can be shown to be cost saving compared to conventional serology testing.

**Status:** Ongoing.

**Personnel:** Damian Conway, Rebecca Guy

**Funding:** NHMRC program grant  
**Co-location:** *Sexual Health Program and Biostatistics, HIV Epidemiology and Prevention Program, Surveillance and Evaluation Program for Public Health*

---

### Evaluation of sexual health services for men who have sex with men in Perth

Review of sexual health services for gay, bisexual and other men who have sex with men (MSM). The Western Australian AIDS Council (WAAC) provides a peer (or community) based sexual health services for gay, bisexual, and other (MSM) clients at

two sites. This model is a relatively new approach to HIV/STI service delivery among MSM in Western Australia. This study will describe the approach and compare it with two other service delivery models (general practice and sexual health clinic). It will describe the clinic (funding, staffing, location), the MSM clients attending (numbers, demographics, testing patterns, reasons for attending) and the clients perceptions of the services. Multiple data collections will take place.

**Status:** Data collection for patient survey complete with 373 participants. HIV and STI lab testing data pending. Report in preparation with manuscript for journal submission to follow during 2013.

**Personnel:** Damian Conway, Rebecca Guy, Denton Callander

**Collaborators:** Martin Holt, Lewis Marshall, Trish Langdon, Michael Atkinson, Jenny McCloskey, Ric Chaney

**Funding:** NHMRC Program grant

**Location:** *Sexual Health Program*

---

## Genital Warts Surveillance Network

A national program of human papilloma virus (HPV) vaccination of Australian teenage girls and young women requires systems that can provide long-term surveillance for trends in HPV-related diseases.

Genital warts can only be prevented by quadrivalent vaccine that also covers HPV types 6 and 11. We established a network for enhanced sentinel surveillance of genital warts in eight larger sexual health clinics across Australia.

**Status:** Two further reports submitted for publication.

**Personnel:** Basil Donovan, Rebecca Guy, Hammad Ali, David Regan, Andrew Grulich, Handan Wand

**Collaborator:** Christopher Fairley

**Funding:** CSL Biotherapies Ltd

**Co-location:** *Sexual Health Program, Biostatistics and Databases Program and HIV Epidemiology and Prevention Program*

---

## eTEST An initiative to enhance STI Testing in gay men

Regular testing of sexually active gay men is required to prevent ongoing transmission of STIs. This project assesses whether a multi-faceted intervention which involves software designed to encourage clinicians to test through passive prompts, SMS recall messaging, audit tools, education and incentives for testing can increase testing

rates in general practice. eTEST will take place in Sydney among 10-15 GP clinics with the aim of increasing HIV/STI testing to at least two times per year in high-risk gay men, four times per year in HIV positive men, and re-testing after a chlamydia and gonorrhoea infection. These aims are in accordance with the testing guidelines for men who have sex with men.

**Status:** Recruitment for eTEST finished, with interventions designed for eight clinics in NSW and one in VIC; The collection of testing and positivity surveillance data was organised for each site and audit reports were presented to several clinics; Ongoing support to participating clinics and regular data reporting will continue into 2013

**Personnel:** Rebecca Guy, Denton Callander, Larissa Lewis, Handan Wand, John Kaldor, Basil Donovan

**Collaborators:** Chris Bourne (Sydney Sexual Health Centre); Vijay Ramanathan (Central Sydney GP Network); Jane Hocking (University of Melbourne); Mark Stooze (Burnet Institute); John de Wit, (National Centre in HIV Social Research); Cathy Pell, (Taylor Square Private Clinic); Liza Doyle, (Australasian Society for HIV Medicine); Geoff Honnor (ACON); Barry Edwards (NSW Health); Sonny Williams (Positive Life)

**Funding:** NSW Ministry of Health

**Co-location:** *Sexual Health Program, Biostatistics and Databases Program and Public Health Interventions Research Group*

---

## A longitudinal study of bacterial vaginosis and *Mycoplasma genitalium* in young Australian women

Little is known about the epidemiology and natural history of bacterial vaginosis (BV) and nothing is known about *Mycoplasma genitalium* (MG) infection in Australian women. We seek to determine the prevalence, incidence and persistence of BV and MG in a general population of Australian women using the cohort established by the CIRIS study. This study is lead by the Centre for Women's Health and Society at University of Melbourne.

**Status:** Two reports have been published in PLoS one and Clinical Infectious Diseases.

**Personnel:** Basil Donovan

**Collaborators:** Jane Hocking, Jenny Walker, Christopher Fairley, Marcus Chen, Catriona Bradshaw, Jane Gunn, Marie Pirotta, Veerakathy Harindra, Lyle Gurrin L, Kathy McNamee (University of Melbourne); Sepehr Tabrizi, Suzanne

Garland (Royal Women's and Royal Children's Hospitals, Melbourne)

**Funding:** NHMRC Project Grant

**Co-location:** *Sexual Health Program*

---

## Rapid HIV testing in men who have sex with men in sexual health clinics in Sydney

This is the first study to use rapid HIV tests in a clinical setting in NSW. The study will be undertaken at four public sexual health clinics in Sydney: Sydney Sexual Health Centre, Albion Street Centre, Clinic 16 Royal North Shore Hospital and Parramatta Sexual Health Clinic. The rapid HIV test used in the study is the Alere Determine HIV 1&2 Antigen/Antibody Combo assay which gives a result in 21 minutes. Men who have sex with men and who attend the study sites for HIV screening will be offered rapid HIV testing. Participants will undergo usual care in relation to sexually transmissible infection screening and conventional HIV serology testing. The participants' rapid HIV test results will be provided during their visit, and if the result is reactive they will be referred to the counsellor for support. The evaluation will assess acceptability of the rapid HIV testing process among clients and clinic staff, barriers to HIV testing, the impact of rapid HIV testing on client flow, the performance of the rapid test compared to conventional laboratory HIV serology, and the cost of rapid HIV testing in a sexual health clinic settings, compared with standard of care.

**Status:** Ethics and site-specific approvals and staff training completed. Staff were trained in rapid HIV testing as part of a formal training workshop conducted in partnership with the National Serology Reference Laboratory and the St Vincent's Centre for Applied Medical Research. By the end of 2012, 1672 men had 1981 rapid tests performed at the four clinic sites. Initially funded through NHMRC STI program grant, NSW Health awarded funding for expansion of the study to more sites around NSW. There were 1111 participants in the patient acceptability survey and 68 participants in the staff acceptability survey. Three manuscripts are in preparation for journal submission in 2013.

**Personnel:** Damian Conway, Rebecca Guy, Andrew Grulich

**Collaborators:** Martin Holt, Philip Cunningham, Don Smith, Phillip Keen, Stephen Davies, Deborah Couldwell, Anna McNulty

**Funding:** NHMRC

**Location:** *Sexual Health Program*

---

## REACT: Chlamydia re-test trial

Chlamydia re-infection is common in women and men. Chlamydia re-infections increase the risk of chlamydia-related sequelae such as pelvic inflammatory disease (PID) and infertility, when compared to initial infection, and in men who have sex with men (MSM) has been associated with an increased HIV seroconversion risk. Clinical guidelines in Australia recommend that all people treated for chlamydia undergo a repeat test three months after initial treatment. This randomised controlled trial will assess the effectiveness of a SMS reminder and home-based self-collected samples (home group) to increase the proportion of patients re-tested after a chlamydia infection, compared to an SMS reminder and clinic testing (clinic group). Approximately 600 patients diagnosed with chlamydia across two sexual health clinics will be randomised to the home group or the clinic group.

**Status:** Recruitment completed in September 2012. Follow-up to continue until February 2013

**Personnel:** Kirsty Smith, Rebecca Guy, Handan Wand, Basil Donovan, John Kaldor

**Collaborators:** Christopher Fairley, Marcus Chen, Catriona Bradshaw, Karen Worthington, Jane Hocking, Anna McNulty, Phillip Read, Simon Wright, Samantha Morgan, Sepehr Tabrizi, Suzanne Garland, Bill Rawlinson, Marion Saville, Gary Rickard

**Funding:** NHMRC STI Program Grant  
**Co-location:** *Sexual Health Program, Public Health Interventions Research Group and Biostatistics and Databases Program*

---

## Report on the sex industry in New South Wales

This is a state-specific report of the sex industry in New South Wales that was commissioned by the NSW Ministry of Health.

**Status:** Final report launch February 2012.

**Personnel:** Basil Donovan, Chris Harcourt, John Kaldor, Handan Wand, Lucy Watchirs Smith

**Collaborators:** Sandra Egger (Faculty of Law, UNSW); Sepehr Tabrizi (Royal Women's and Royal Children's Hospitals, Melbourne); Christopher Fairley (Melbourne Sexual Health Centre/University of Melbourne)

**Funding:** NSW Health

**Location:** *Sexual Health Program*

---

## Syphilis testing in HIV positive men: a multi-site review

Clinical guidelines recommend three-monthly syphilis testing in HIV-positive men who have sex with men (MSM) as part of quarterly routine HIV management checks. However, not all men are having quarterly HIV management checks, particularly if they have been clinically stable for a number of years. This study aims to assess the syphilis testing frequency in HIV positive men against the frequency of HIV management checks at seven clinical sites in Melbourne and Sydney, Australia.  
**Status:** Final report published in *Sexually Transmitted Diseases*.

**Personnel:** Rebecca Guy, Handan Wand  
**Collaborators:** Andrew Carr, John McAllister, Karl Hesse (St Vincent's Hospital, Sydney); Marcus Chen, Christopher Fairley (Melbourne Sexual Health Centre/University of Melbourne); Anna McNulty, Chris Bourne (Sydney Sexual Health Centre); David Baker (East Sydney Doctors); Norm Roth (Prahran Market Clinic); BK Tee (The Centre Clinic); Jenny Hoy, Kerry Watson (The Alfred Hospital); Mark Stooze, Carol El-Hayek (Burnet Institute)

**Co-location:** *Sexual Health Program and Biostatistics and Databases Program*

---

## Test, Treat AND GO, the TTANGO Trial: a randomised trial of rapid point-of-care tests for chlamydia and gonorrhoea infections in remote Aboriginal communities

Many remote and isolated communities in Australia continue to experience higher rates of chlamydia and gonorrhoea despite focused efforts at STI prevention and control. In order to interrupt disease transmission and reduce the risk of complications, early diagnosis and treatment is important. However in many remote communities, there are long delays between clinical testing and the provision of treatment, due to both distance from laboratories and difficulties in recalling patients when results arrive. This study will be the first to trial the addition of point-of-care testing to standard diagnostic procedures with aims of improving the interval time to treatment and decreasing rates of persistent chlamydia and gonorrhoea infections (many of which are due to re-infection). The randomised controlled study will take place in remote communities in Queensland and Western Australia. The study will utilise the

GeneXpert, a new point-of-care diagnostic device based on molecular detection of infections. The GeneXpert performs on par with routine laboratory based tests and has the potential to revolutionise point-of-care testing for chlamydia and gonorrhoea, previously reliant on poor performing lateral flow devices.

**Status:** Ethical approval obtained in QLD and WA;

Sites identified, with signing of participation agreements underway; Operational group active and meeting fortnightly; Reference group established with first meeting held.

**Personnel:** Rebecca Guy, James Ward, Basil Donovan, John Kaldor, David Wilson, David Regan, Handan Wand, Louise Causer.

**Collaborators:** Lisa Natoli, David Anderson, Belinda Hengel, David Whiley, Sepehr Tabrizi (Royal Women's Hospital); Christopher Fairley, Mark Shephard, Lisa Bastian, Sharon Clews, Jarran Heywood  
**Funding:** NHMRC project grant  
**Co-located:** *Sexual Health Program, Aboriginal and Torres Strait Islander Health Program, Public Health Interventions Research Group, Biostatistics and Databases Program and Surveillance and Evaluation Program for Public Health*

---

## Uptake and outcomes of chlamydia or gonorrhoea testing programs in non-clinical settings: a systematic review and meta-analysis

Primary care clinics play an important role in the prevention and management of sexually transmissible infections (STIs). A large proportion of young people attend primary care clinics each year for one reason or another and most chlamydial infections are diagnosed in this setting. However, despite the central role of primary care in chlamydia management, the proportion of sexually active young people attending these clinics who are offered screening at the time of their visit is suboptimal in many developed countries. This systematic review aims to examine the participation rate and outcomes of chlamydia and/or gonorrhoea testing programs among young people outside of clinical services.  
**Status:** Final report published in BMC public health.

**Personnel:** Rebecca Guy, Muhammad Shahid Jamil, Hammad Ali, Basil Donovan, John Kaldor.

**Collaborators:** Jane Hocking (University of Melbourne); Heidi Bauer (Program Development and Evaluation, STD Control Branch, California Department of Public Health); Jennifer Walker

(Melbourne Sexual Health Centre/  
University of Melbourne)

**Funding:** Nil

**Co-location:** *Sexual Health Program and Biostatistics, Public Health Interventions Research Group and Biostatistics and Databases Program*

## COLLABORATIVE PROJECTS WITH SYDNEY SEXUAL HEALTH CENTRE

### Do SMS reminders improve retesting rates after chlamydia infection in heterosexuals?

Chlamydia re-infection is common in women and men. By 12 months, re-infection rates have been reported to be as high as 22% in a chlamydia re-infection prospective cohort of young women in Australia 2008-2009. In light of the high re-infection rates, clinical guidelines in Australia recommend that any people diagnosed with chlamydia should be re-tested in three months to detect chlamydia re-infections. Despite this, a recent analysis of heterosexuals attending 19 sexual health clinics found that the proportion of patients with chlamydia infection who were re-tested in one-to-four months was 11.9% in heterosexual males and 17.8% in heterosexual females. In late 2008, Sydney Sexual Health Centre implemented a SMS reminder system to improve the frequency of the re-testing within three months of a chlamydia infection. We evaluated the impact of the SMS reminder system on chlamydia re-testing within three months of initial infection in heterosexuals attending Sydney Sexual Health Clinic. A controlled observational study design was used.

**Status:** Manuscript published. The project informed the design of a randomised controlled trial of home collection combined with SMS reminders (REACT).

**Personnel:** Rebecca Guy, Handan Wand  
**Collaborators:** Phillip Read, Aurelie Kenigsberg, Vickie Knight, Anna McNulty (Sydney Sexual health Centre)

**Co-location:** *Sexual Health Program and Biostatistics and Databases Program*

### Do SMS reminders improve STI testing frequency in men who have sex with men (MSM)?

In late 2008, Sydney Sexual health Centre implemented a reminder system

to improve re-testing rates for HIV and sexually transmissible infections (STIs) in men who have sex with men (MSM); three-to-six monthly SMS reminders were recommended for high-risk MSM. We evaluated the impact of the SMS reminder system on HIV/STI testing re-testing rates in MSM attending Sydney Sexual Health Clinic. A controlled observational study design was used. The evaluation demonstrated re-testing was 4.4 times more likely (95% CI 3.5 to 5.5) in the SMS group than the comparison group.

**Status:** Final report published in *Sexually Transmitted Infections*

**Personnel:** Rebecca Guy, Handan Wand  
**Collaborators:** Chris Bourne, Vickie Knight, Heng Lu, Anna McNulty (Sydney Sexual health Centre)

**Funding:** Nil

**Co-location:** *Sexual Health Program and Biostatistics and Databases Program*

### The use of SMS reminders to increase completion of Hepatitis A and B vaccination courses in a Sydney sexual health clinic

Hepatitis B virus (HBV) is a major public health problem worldwide. Prevention is widely acknowledged to be the most effective approach to the problem. A vaccine has been available since 1982, and the standard immunisation schedule consists of three injections, at zero, one and six months. There are also Hepatitis A/B combinations vaccinations which follow the same schedule. Noncompliance with vaccination schedules undermines the potential benefits of immunisation. Despite this, the completion rates among sexual health clinic attendees have been reported to be suboptimal in many clinics. In 2008, Sydney Sexual health Centre implemented a SMS reminder system to improve compliance with HBV vaccine schedule. The purpose of this study was to evaluate whether a reminder of the next vaccine dose sent by (SMS to the vaccinee's mobile phone increases compliance with hepatitis B vaccination schedule. A secondary objective was to identify differences in completion between patient sub-groups eligible for HBV vaccination.

**Status:** Analysis complete.

**Personnel:** Handan Wand, Rebecca Guy, Amalie Dyda, Ruth McIver

**Collaborators:** Phillip Read, Vickie Knight, Anna McNulty (Sydney Sexual health Centre)

**Funding:** Nil

**Co-location:** *Sexual Health Program and Biostatistics and Databases Program*

### New Xpress STI screening clinic improves patient journey and clinic capacity at a large sexual health clinic

In December 2010 a new 'express' testing service (Xpress) was implemented alongside routine clinics at a large sexual health clinic. Xpress involved a computer assisted self interview (CASI), self-collected samples, and enrolled nurse staffing. The evaluation demonstrated the Xpress clinic improved the patient journey in regards to waiting times and length of stay at the clinic, and even though the Xpress clinics was not fully utilised, more patients were seen overall in the clinic with minimal additional costs.

**Status:** Manuscript published in *Sex Transm Dis*.

**Personnel:** Handan Wand, Rebecca Guy, Basil Donovan

**Collaborators:** Phillip Read, Vickie Knight, Heng Lu, Anna McNulty (Sydney Sexual Health Centre); Nathan Ryder, (Sexual Health and Blood Borne Virus Unit, Department of Health and Families, NT)

**Funding:** Nil

**Co-location:** *Sexual Health Program and Biostatistics and Databases Program*

### Seasonal trends in STI diagnoses: an investigation

Local, state-wide and national notification data for STIs appears to show consistent variation at specific times during the year. The aim of the study is to identify seasonal trends in STI diagnoses, and to correlate this to trends in sexual behaviour, alcohol and drug use. Data from the Sydney Sexual Health Centre database will be used for this analysis.

**Status:** Analysis complete. Manuscript being prepared.

**Project members:** Handan Wand, Basil Donovan, Rebecca Guy

**Collaborators:** Phillip Read, Aurelie Kenigsberg, Vickie Knight, Anna McNulty (Sydney Sexual Health Centre)

**Funding:** Nil

**Co-location:** *Sexual Health Program and Biostatistics and Databases Program*

### Culturally and linguistically diverse MSM at SSHC: diagnostic and behavioural trends

People of culturally and linguistically diverse backgrounds (CALD) and men who have sex with men (MSM) are recognised as potential priority populations in the 6th National HIV Strategy. The Sydney Sexual Health

Centre (SSHC) sees a range of MSM from different CALD backgrounds, particularly Asian. Differences may exist in both STI risk behaviour, testing patterns and prevalence of HIV and sexually transmissible infections (STIs) between CALD and non-CALD MSM, and the information can inform health promotion programs. The analysis demonstrated the annual proportion of MSM who were born in Asia increased over time, and compared to non-Asian MSM, Asian MSM were more likely to be younger, less likely to report sexual risk behaviour and ever injected drugs, less likely to have presented with genital symptoms, less likely to report a previous HIV testing, and more likely to be diagnosed with chlamydia.

**Status:** The analysis is completed and was presented at ASHM conference 2011; manuscript is in preparation.

**Personnel:** Rebecca Guy, Handan Wand, Basil Donovan

**Collaborators:** Chris Bourne (NSW Health); Phillip Read (Sydney Sexual Health Centre)

**Funding:** Nil

**Co-location:** *Sexual Health Program and Biostatistics and Databases Program*

### Unprotected oral sex and sex workers at Sydney Sexual Health Centre

Unprotected fellatio at work may represent a risk for STI acquisition in the oropharynx, and subsequent onwards transmission. This study seeks to identify the determinants of unprotected fellatio, and where possible correlate this to the presence of gonorrhoea in the oropharynx. Sex workers attending Sydney Sexual Health Centre were asked about their use of condoms for fellatio at work, and swabs were taken for gonorrhoea testing.

**Status:** Final report published in STI in 2012

**Personnel:** Basil Donovan, Rebecca Guy, Handan Wand

**Collaborators:** Phillip Read, Anna McNulty (Sydney Sexual Health Centre)

**Co-location:** *Sexual Health Program and Biostatistics and Databases Program*

## SURVEILLANCE AND EVALUATION PROGRAM FOR PUBLIC HEALTH 2012 STUDIES

### Modelling and Health Economic Evaluation of HIV Epidemics and Prevention Programs in Australia

This project carries out rigorous evaluations of public health programs to

understand drivers of epidemic trends, project future epidemic trajectories, and assess the potential impact of public health strategies. It also extends impact evaluations to assess what the investments in programs have brought, at what cost, and whether the past or future return on investment warrants shifts in funding. In addition to broad quantitative evaluation aims, national and jurisdiction-specific mathematical models of HIV transmission are developed to represent clinical care and access, relevant biological factors, heterogeneity of sexual behaviour and epidemiology. The models are used to understand past epidemic trends and to simulate the expected population incidence and prevalence of HIV in disease and clinical burdens according to a number of future scenarios of specific programmatic and/or policy changes. HIV clinical service supply is also monitored through surveys sent to hospital departments, sexual health services and general practices with expertise in HIV management Australia-wide. This project is ongoing to address current policy, program and research questions nationally, sub-nationally and inform global HIV prevention discussions. The results from this project provide insight into reasons for observed surveillance trends and a stronger evidence-base for designing effective HIV policies and programs locally and abroad.

**Status:** Ongoing

**Personnel:** David Wilson, Richard Gray, Alex Hoare, Ann McDonald, James Jansson, Kylie-Ann Mallitt, Kathy Petoumenos

**Collaborators:** Levinia Crooks (Australasian Society for HIV Medicine (ASHM)); Jo Watson (National Association of People Living with HIV/AIDS (NAPWA)); NSW Health; Australian Research Centre in Sex Health and Society, La Trobe University, Melbourne

**Funding:** Department of Health and Ageing (DoHA); NSW Health; Australian Research Council (ARC); National Association of People Living with HIV/AIDS (NAPWA); National Health and Medical Research Council (NHMRC).

### Modelling & Health Economic Evaluation of Hepatitis Epidemics & Prevention Programs in Australia

This project aims to conduct estimates and projections of hepatitis B and hepatitis C epidemics in Australia including incidence of infection,

morbidity and mortality and estimate the current burden of disease. The project also aims to evaluate the epidemiological and economic impact of prevention and treatment strategies for reducing the burden of viral hepatitis.

**Status:** Ongoing

**Personnel:** David Wilson, Rosie Thein, Lisa Maher, Greg Dore, Tony Butler, Shamin Kinathil

**Collaborator:** Murray Krahn, Ahmed Bayoumi (University of Toronto); Chris Bauch (University of Guelph); Marina Klein (Canadian Institutes of Health Research)

**Funding:** National Health and Medical Research Council (NHMRC); Canadian Institutes of Health Research

**Co-location:** *Surveillance and Evaluation Program for Public Health; Viral Hepatitis Epidemiology and Prevention Program; Viral Hepatitis Clinical Research Program; Public Health Interventions Research Group; Justice Health Research Program.*

### Modelling and Health Economic Evaluation of STI Epidemics & Prevention Programs in Australia

Surveillance systems to monitor the extent, characteristics, and trends of transmission and burden of disease of STIs in Australia may not reflect the true epidemics due to dependencies on testing rates among populations at higher risk or other biases in healthcare-seeking subpopulations. This project develops and applies tools to adjust routinely collected surveillance data to provide better estimates of the prevalence and incidence of new STI infections and morbidities. This project also evaluates the past impact of programs and the potential future epidemiological and economic impact of new strategies. The methods used involve a combination of data synthesis, literature review, new epidemiological and statistical analyses from existing data sources, and mathematical modelling. Mathematical models which describe the transmission of STIs are powerful tools that can facilitate our understanding of the transmission dynamics and the epidemiology of an STI in a population. Importantly, this can also help to identify the most effective interventions for lowering STI prevalence in a population. The output from these models can link with economic models to examine issues of allocative and technical efficiency (whether to invest and if so, how). In view of the marked increases in STIs and the National STI Strategy, there is an immediate need for tools to help explore

the potential of, and inform the design of interventions aimed at reducing STIs. The findings from this project will inform the development of public health policy on the most effective and cost-effective strategies for reducing the incidence of STIs and their sequelae in Australian populations.

**Status:** Ongoing

**Personnel:** David Wilson, Richard Gray, Gordana Popovic, Matthew Law, John Kaldor, Andrew Grulich, Basil Donovan, David Regan, David Philp, Ben Hui.

**Collaborators:** Jane Hocking (University of Melbourne); Anthony Smith (La Trobe University); Rob Carter (Deakin University); Queensland University of Technology; Papua New Guinea Institute of Medical Research; James Ward (The Baker IDI Institute)

**Funding:** National Health and Medical Research Council (NHMRC)

**Co-location:** *Surveillance and Evaluation Program for Public Health; Biostatistics and Databases Program; Public Health Interventions Research Group; Sexual Health Program; Aboriginal and Torres Strait Islander Health Program; HIV Epidemiology and Prevention Program.*

---

## Evaluation & Cost Effectiveness of HIV Prevention in Asia

In Asia, HIV epidemics are concentrated, driven by the prevalence of risky practices such as injecting drug use (IDU) and unprotected sex among men who have sex with men (MSM), and sex workers and their sexual contacts. Drawing from data and experiences from countries in East Asia and Pacific, Europe and central Asia and the South Asia Region, this study contributes to the improvement of the effectiveness and efficiency of HIV prevention responses in Asia's concentrated HIV epidemic settings. HIV/AIDS effectiveness evaluation and cost-effectiveness studies have become important analytical tools to understand what HIV investments have bought, whether the interventions averted new infections and AIDS deaths, and at what cost. They can support decision-making and prioritisation of intervention strategies and target groups within the HIV/AIDS response with its overall goals of minimising the burden of disease and maximising health outcomes.

This project involves the conduct of numerous large-scale empirical evaluation trials across multiple countries in Asia and Eastern Europe,

a large national technical efficiency study, and a series of modelling and economic based post-hoc evaluation, projection, cost-effectiveness, return on investment and allocative efficiency studies.

**Status:** Ongoing

**Personnel:** David Wilson, Klara Henderson, Lei Zhang, Richard Gray, Cliff Kerr, Karina Razali, Rosie Thein, Alexander Hoare, Josephine Reyes, Eric Chow, Quang Pham, Corrine Iu, Dam Anh Tran, Kelly-Jean Heymer, Amy Kwon, Karen Schneider, Andrew Craig, Megan Tapia.

**Collaborators:** World Bank Global HIV/AIDS Program; National Center for AIDS Prevention and Control; Nantong University; Tsinghua University; University of Indonesia; Indonesia National AIDS Commission; Indonesian Ministry of Health; University of Malaya; Malaysian Ministry of Health; Malaysian AIDS Council; Malaysia National Anti-Drug Agency; Royal Malaysian Police; Malaysian Prison Department; National Epidemiology Center, Department of Health, Philippines; World Health Organization; HIV-NAT (HIV-Netherlands-Australia-Thailand) Research Collaboration; Thai Ministry of Health; Viet Nam Administration of HIV/AIDS Control; UNAIDS; Pasteur Institute; National Drug and Alcohol Research Centre, UNSW; School of Public Health and Community Medicine, UNSW; HART Consulting; Yale University; Philippines National AIDS Council; AIDS Projects Management Group; Hanoi School of Public Health; Mai Hoa Do Consulting; China National Centre for AIDS/STD Control and Prevention; USAID; Alliance Ukraine; Department for International Development; Family Health International (FHI)

**Funding:** The World Bank Group; Department for International Development (DFID)

---

## National Surveillance of BBV&STIs

The Surveillance and Evaluation Program for public health monitors the pattern of transmission of HIV, viral hepatitis and specific sexually transmissible infections in Australia, in collaboration with the Australian Government Department of Health and Ageing, State and Territory health authorities and collaborating networks. The program coordinates national surveillance for HIV, managing the national HIV/AIDS

registries, and develops new initiatives in surveillance, such as monitoring incident HIV infection through the use of specialised laboratory tests, and carries out quality control studies of surveillance data. The surveillance reports: *HIV, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report; Bloodborne viral and sexually transmitted infections in Aboriginal and Torres Strait Islander people: Surveillance and Evaluation Report*, the *Australian HIV Surveillance Report*; and the *National Blood-borne virus and Sexually Transmissible Infections Surveillance and Monitoring Report*, are compiled annually as part of this surveillance project. The program also provides the secretariat supporting the activities of the National Blood Borne Virus and Sexually Transmissible Infections Surveillance Committee and other *ad hoc* sub-committees established to develop new data sources and standardised procedures for data collection across State and Territory health jurisdictions in Australia, to support this project. The Surveillance and Evaluation Program for Public Health at the Kirby Institute is a research associate of the Australian Institute of Health and Welfare.

In addition to the production of the above-named reports, activities conducted within this project, in 2012 included:

- Monitoring perinatal exposure to HIV
- Monitoring long-term outcomes of chronic hepatitis B and C
- Monitoring long-term outcome of newly acquired HIV infection
- Monitoring HIV transmission through specialised tests for incident HIV infection
- Monitoring HIV prevalence and incidence through sexual health clinics
- Monitoring HIV antibody prevalence among prison entrants in Australia
- Monitoring cases of newly diagnosed viral hepatitis
- Monitoring diagnoses of newly acquired HIV infection
- Monitoring cases of newly diagnosed HIV infection
- Monitoring cases of AIDS
- Australian HIV Surveillance Report
- Merging National HIV and AIDS registries
- Community-based behavioural and epidemiological surveillance among culturally and linguistically diverse populations

**Status:** Ongoing

**Personnel:** Ann McDonald, Melanie Middleton, David Wilson, Elizabeth Mlambo, Megan Tapia, Rebecca Guy, Jenny Iverson, Mihaela Ivan, Hammad Ali, Stephen Wright, James Jansson,

Basil Donovan, John Kaldor, Tony Butler, David Cooper, Gregory Dore, Sean Emery, Andrew Grulich, Lisa Maher, Joanne Micallef, Kathy Petoumenos, Garrett Prestage

**Collaborators:** State and Territory health authorities; Australian Government Department of Health and Ageing; State and Territory Departments of Corrections; Australian Paediatric Surveillance Unit; Australian Institute of Health and Welfare; NSW State Reference Laboratory for HIV; Australia and New Zealand Liver Transplant Register; networks involved in surveillance for HIV, viral hepatitis and sexually transmissible infections, James Ward (The Baker IDI Institute)

**Funding:** Commonwealth Department of Health and Ageing

---

## National Surveillance of Trachoma

This project is contained within the responsibility of the National Trachoma Surveillance and Reporting Unit (NTSRU) which is based at the Kirby Institute. The NTSRU is responsible for trachoma data collation, analysis and reporting related to the ongoing evaluation of trachoma control strategies in Australia. The unit was particularly established due to recent action by the Commonwealth Department of Health and Ageing in response to trachoma levels. Australia is the only developed country where trachoma is still endemic. It occurs primarily in remote and very remote Aboriginal communities in the NT, SA and WA. The Australian Government, in accordance with GET 2020 initiative and the Closing the Gap initiative, through the *Improving Eye and Ear Health Services for Indigenous Australians for Better Education and Employment Outcomes* measure, committed \$16 million over a four-year period towards eliminating trachoma in Australia. The funding is to be used for improving and expanding screening and control activities, as well as establishing a strong framework for monitoring and evaluation.

**Status:** The second annual *National Trachoma Surveillance Report*, edited by the NTSRU, was produced in 2012, due for release in 2013.

**Personnel:** Carleigh Cowling, John Kaldor, David Wilson, Bette Liu, Gordana Popovic, Andrew Shattock

**Collaborators:** Office for Aboriginal and Torres Strait Islander Health (OATSIH), Department of Health and Ageing; Aboriginal Community Controlled Health Services in the NT, WA and SA;

Aboriginal Medical Services Alliance of the Northern Territory; Aboriginal Health Council of South Australia; Country Health South Australia; Department of Health, Western Australia; The University of Melbourne; Western Australia Country Health Service; National Trachoma Reference Group; James Ward (The Baker IDI Institute); Tom Snelling (Sydney Children's Hospital)

**Funding:** Commonwealth Department of Health and Ageing (DoHA)

**Co-location:** *Surveillance and Evaluation Program for Public Health; Public Health Interventions Research Group; Aboriginal and Torres Strait Islander People Program*

---

## National Surveillance of Transfusion-transmissible Infections

This project collects and analyses national donation testing data on Australian blood donors. It is designed to be a core evidence resource to inform further revision and evaluation of donor selection guidelines and donation testing algorithms in Australia. In addition, a large blood donor survey has been conducted and calculations of risk of infections in the blood supply to provide important evidence for decisions around exclusion criteria of donors to ensure continued maintenance of a safe blood supply. Surveillance activities and analyses of transfusion transmissible infections in Australia were once again conducted in 2012 which led to the second-annual 'Transfusion transmissible infections in Australia Surveillance Report', being published in December of that year.

**Status:** The second annual report on Australian blood donors' surveillance was published in December 2012.

**Personnel:** Tarana Lucky, David Wilson, Ann McDonald, Handan Wand,

**Collaborators:** Clive Seed, Sue Ismay, Stephen Wroth, June Lee, Anthony Keller, Claire Styles, Hung-Sing Yang

**Funding:** Australian Red Cross Blood Service, Australian Research Council (ARC), Commonwealth Department of Health and Ageing

---

## Modelling Cellular & Intercellular Dynamics of Chlamydia Infections

*Chlamydia trachomatis* is the most commonly notified sexually transmitted disease in Australia, and in women even asymptomatic infections can cause infertility. Chlamydial infections are not restricted to humans: *Chlamydia pecorum* infects koalas, and is considered to be an important driver behind

declining koala population levels. This study aims to discover the essential correlates of chlamydial infection of the human reproductive tract, to determine the most effective vaccination strategy against *Chlamydia* in koalas given the practical and financial restraints on vaccine distribution, and to gain qualitative and quantitative insight into the innate immune response to *Chlamydia* infection. In 2012, this project contributed a book chapter titled 'Biomathematical Modeling of Chlamydia Infection and Disease' to the American Society for Microbiology publication 'Intracellular Pathogens I: Chlamydiales' (Tan and Bavoil) and neared completion of an evaluation of koala vaccination strategies. Data collation is also near completion for assessing correlates of infection of the human reproductive tract.

**Status:** Ongoing

**Personnel:** David Wilson, Andrew Craig  
**Collaborators:** Patrik Bavoil, Jacques Ravel, Anthony Maurelli, Garry Myers (University of Maryland, Baltimore); Peter Timms, Ken Beagley (Queensland University of Technology); Roger Rank (Arkansas Children's Hospital Research Institute)

**Funding:** National Institutes of Health (NIH); Australian Research Council (ARC)

---

## THERAPEUTIC AND VACCINE RESEARCH PROGRAM 2012 STUDIES

---

### PHIDISA Ia

A prospective epidemiological cohort study of HIV and risk-related co-infections in the South African National Defence Force (SANDF).

**Status:** Recruitment opened January 2004.

**Sites:** Six military medical sites in Republic of South Africa

**Enrolled/target:** 8,439/unlimited

**Personnel:** Sean Emery

**Funding:** US National Institutes of Health; US Department of Defense; South African National Defence Force

---

### ENCORE1

Encore1 (NCT01011413) is an ongoing investigator-initiated, international, multicentre, randomised, double blind, placebo-controlled, 96 week non-inferiority trial to determine whether a dose reduction of the antiretroviral drug (ARV) efavirenz (EFV) provides safe and effective viral suppression as part of initial combination antiretroviral therapy



(cART) compared with the currently licensed EFV dose. EFV, a non-nucleoside reverse transcriptase inhibitor, is recommended in current treatment guidelines and used globally in first-line antiretroviral regimens. Worldwide it is estimated that 7.4 million people receive cART. Positive outcomes for reduced dose EFV in Encore1 will change treatment guidelines, with particular relevance to developing countries where HIV is most prevalent and resources more scarce. In these settings, publicly funded roll-out programs could save money by reducing dosages of key ARVs.

**Status:** The study is fully recruited at 38 sites in Argentina, Australia, Chile, Germany, Hong Kong, Israel, Malaysia, Mexico, Nigeria, Singapore, South Africa, Thailand and the United Kingdom. The scheduled week 48 primary endpoint analysis will take place in May 2013.

**Target:** 630

**Personnel:** Rebekah Puls, Dianne Carey, Enmoore Lin, Carlo Dazo, Anna Donaldson, Janaki Amin, Kate Merlin, Julie Yeung, Bertha Fsadni, Ansari Shaik  
**Funding:** Bill & Melinda Gates Foundation

### ENCORE1 CNS Sub-study

A randomised, double-blind, placebo-controlled clinical trial to determine the safety and efficacy of reduced dose efavirenz (400mg qd) versus standard dose efavirenz (600mg qd) as part of combination therapy in treatment naive individuals with HIV infection: EFV central nervous system exposure sub-study.

**Status:** Recruitment is underway.

**Sites:** Five sites in four countries

**Target:** Approximately 40

**Personnel:** Rebekah Puls, Enmoore Lin, Jessica Taylor, Carlo Dazo, Janaki Amin  
**Funding:** UNSW

### ENCORE1 Intensive Pharmacokinetics Sub-study

A randomised, double-blind, placebo-controlled clinical trial to determine the safety and efficacy of reduced dose efavirenz (400mg qd) versus standard dose efavirenz (600mg qd) as part of combination therapy in treatment naive individuals with HIV infection: intensive 24 hour pharmacokinetic analysis.

**Status:** Recruitment is underway.

**Sites:** Four sites in four countries

**Target:** approximately 40

**Personnel:** Rebekah Puls, Dianne Carey, Enmoore Lin, Jessica Taylor, Carlo Dazo, Janaki Amin  
**Funding:** UNSW

### ENCORE1 Neurocognitive Sub-study

This randomised, double-blind, placebo-controlled clinical trial will compare the neurocognitive (NC) function of standard (600 mg) versus reduced (400 mg) dose efavirenz (EFV) to determine its safety and efficacy as part of combination therapy in treatment naive individuals with HIV infection. Seven clinical sites are participating in the sub-study; one in each of Thailand, South Africa, Mexico, Malaysia and two sites in Argentina. Eligible participants will complete a computerised battery of NC tests, the Cogstate™ tests at weeks 0,4,24 and 48. Data from the sub-study will be combined with plasma sampling data from the main study to examine the association between week 4 plasma EFV levels and change from baseline NC function to week 4 and 24.

**Status:** recruitment underway

**Sites:** 17 sites in 11 countries

**Target:** 126

**Personnel:** Amanda Clarke, Rebekah Puls, Anna Donaldson, Stephen Kerr  
**Funding:** UNSW

### SECONDLINE

A randomised open-label study comparing the safety and efficacy of ritonavir boosted lopinavir and 2-3N(t)RTI backbone versus ritonavir boosted lopinavir and raltegravir in participants virologically failing first-line NNRTI/2N(t)RTI therapy.

**Status:** Closed to enrolment

**Sites:** 40

**Target:** 558 recruited

**Personnel:** Mark Boyd, Alli Humphries, Natalie Espinosa, Nisha Seneviratne, Maria Arriaga, Rosemary Robson  
**Funding:** UNSW, Merck, Abbott, amfAR

### SECONDLINE Dried Blood Spot sub-study

To test concordance between dried blood spots to assess viral load and genotypes as compared to centrally tested stored samples.

**Status:** Closed to enrolment

**Sites:** 40

**Target:** 150

**Personnel:** Mark Boyd, Alli Humphries, Natalie Espinosa  
**Funding:** UNSW, Merck, Abbott, amfAR

### SECONDLINE Body Composition sub-study

To determine the difference in mean limb fat changes and BMD changes at the

proximal femur as measured by DXA scan between the two study arms in a sub-set of the SECOND-LINE cohort.

**Status:** Closed to enrolment.

**Sites:** 40

**Target:** 212

**Personnel:** Mark Boyd, Alli Humphries, Nisha Seneviratne, Paddy Mallon, Jennifer Hoy, Waldo Bellosso, Samuel Ferret

**Funding:** UNSW, Merck, Abbott, amfAR

### Strategic Timing of Antiretroviral Therapy (START)

An open-label randomised multicentre trial to examine the safety and efficacy of commencing combination antiretroviral therapy at a CD4+ cell count of > 500 cells/mm<sup>3</sup> versus commencing at a CD4+ cell count of <350 cells/mm<sup>3</sup>. This initiative includes several substantial substudies (see below for details) designed to determine the effects of treatment with ART on neurological manifestations of HIV disease, cardiovascular complications, bone mineral metabolism, chronic obstructive pulmonary disease, liver fibrosis progression and abbreviated forms of informed consent documentation.

**Status:** Recruitment underway

**Sites:** 100 in the pilot phase with 17 sites co-ordinated by the Kirby Institute), expanding in the definitive phase with a further 30 sites co-ordinated by KI (in Argentina, Chile, Mexico, Israel, Thailand, Nigeria, India, Malaysia and Australia).

**Target:** pilot phase enrolment 1200 patients with 220 from sites coordinated by the Kirby Institute; enrolment in the definitive phase will be 4000, with approximately 1000 from sites coordinated by the Kirby Institute

**Personnel:** Cate Carey, Megan Evans, Simone Jacoby, Sally Hough (maternity leave), Joseph Levitt, Sean Emery, Lara Cassar, Sarah Pett

**Funding:** Division of AIDS (DAIDS), The National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH); Australian National Health and Medical Research Council (NHMRC); Agence Nationale de Recherches sur le SIDA et les Hépatites Virales (ANRS, France); Bundesministerium für Bildung und Forschung (BMBF, Germany); NEAT - European AIDS Treatment Network; Department of Bioethics, The Clinical Center, NIH; Division of Clinical Research, NIAID, NIH; National Cancer Institute (NCI), NIH; National Heart, Lung, and Blood Institute (NHLBI), NIH; National Institute of Mental Health (NIMH), NIH; National Institute of Neurological

Disorders and Stroke (NINDS), NIH; National Institute for Arthritis and Multiple Sclerosis (NIAMS), NIH

### **Informed Consent Substudy: A substudy of Strategic Timing of AntiRetroviral Treatment (START)**

This substudy is evaluating understanding of study information and satisfaction with the consent process among research participants of the START protocol, after receiving information from one of two different types of consent form: a standard or a concise consent.

**Status:** Recruitment underway

**Sites:** 75 in the pilot phase with 15 sites in the Sydney region; the definitive phase (from October 2010) with a further 19 sites in the Sydney Region.

**Target:** n=2000.

**Personnel:** Cate Carey, Megan Evans, Simone Jacoby, Sally Hough (maternity leave), Joseph Levitt, Sean Emery, Lara Cassar, Sarah Pett

**Funding:** DAIDS; NHMRC; ANRS, France; BMBF, Germany; NEAT - European AIDS Treatment Network; Department of Bioethics, The Clinical Center, NIH

**Location:** *Therapeutic and Vaccine Research Program*

### **Genomics: A substudy of Strategic Timing of AntiRetroviral Treatment (START)**

The purpose of this substudy is to obtain a whole blood sample from which DNA will be extracted to study validated (present and future) genetic variants that determine the risk of the various primary and secondary outcomes assessed in START.

**Status:** Since April 2009, 1156/4000 enrolled, with 172 in the Sydney region.

**Sites:** As many of the START sites as possible to be involved; to date 125 sites are registered with 17 in the Sydney region

**Target:** As many of the overall cohort of 4000 START patients as possible.

**Personnel:** Cate Carey, Megan Evans, Simone Jacoby, Sally Hough (maternity leave), Joseph Levitt, Sean Emery, Sarah Pett

**Funding:** DAIDS; NHMRC; ANRS, France; BMBF, Germany; NEAT - European AIDS Treatment Network; Division of Clinical Research, NIAID, NIH

**Location:** *Therapeutic and Vaccine Research Program*

### **Neurology: A substudy of Strategic Timing of AntiRetroviral Treatment (START)**

The purpose of the substudy is to determine whether immediate initiation of antiretroviral therapy (ART) in ART-naïve persons with a CD4+ count > 500 cells/mm<sup>3</sup> is superior, with respect to neurocognitive function, compared to deferring ART initiation until CD4+ counts decline to 350 cells/mm<sup>3</sup>.

**Status:** Recruitment opened April 2009. To date 468/600 enrolled, with 158 in the Sydney region.

**Sites:** 30 in the pilot phase (11 in Sydney region) expanding to a total of 33 sites

**Target:** n=600

**Personnel:** Cate Carey, Megan Evans, Simone Jacoby, Sally Hough (maternity leave), Joseph Levitt, Sean Emery, Sarah Pett

**Funding:** DAIDS; NHMRC; ANRS, France; BMBF, Germany; NEAT - European AIDS Treatment Network; NIMH, NIH; NINDS, NIH

**Location:** *Therapeutic and Vaccine Research Program*

### **Arterial Elasticity: A substudy of Strategic Timing of AntiRetroviral Treatment (START)**

The arterial elasticity substudy will determine if early initiation of ART is superior to deferred ART in increasing large artery elasticity (LAE) and small artery elasticity (SAE) (i.e., in reducing arterial stiffness) as measured by pulse wave tonometry.

**Status:** Recruitment open

**Sites:** 17 sites in the pilot phase (5 sites co-ordinated by KI), expanding to 21 sites, with one additional site co-ordinated by KI (in India), and six sites in Australia, Thailand and Argentina contributing patients utilising tonometers located at other sites in the same city.

**Target:** n=300

**Personnel:** Joseph Levitt, Cate Carey, Megan Evans, Simone Jacoby, Sally Hough (maternity leave), Sean Emery, Sarah Pett

**Funding:** DAIDS; NHMRC; ANRS, France; BMBF, Germany; NEAT - European AIDS Treatment Network and NHLBI, NIH

**Location:** *Therapeutic and Vaccine Research Program*

### **Pulmonary Substudy: A substudy of Strategic Timing of AntiRetroviral Treatment (START)**

The pulmonary substudy will determine if early initiation of ART is superior to deferred ART in with regards to pulmonary function as assessed by annual spirometry and respiratory health questionnaire.

**Status:** 263/1000 enrolled, with 38 co-ordinated by KI.

**Sites:** 45 in the pilot phase with 7 sites in the Sydney region; a further 40 sites will be added for the definitive phase including another 17 sites co-ordinated by KI.

**Target:** n=1000

**Personnel:** Cate Carey, Megan Evans, Simone Jacoby, Sally Hough, Joseph Levitt, Sean Emery, Sarah Pett

**Funding:** DAIDS; NHMRC; ANRS, France; BMBF, Germany; NEAT - European AIDS Treatment Network and NHLBI, NIH

**Location:** *Therapeutic and Vaccine Research Program*

### **Bone Mineral Density: A substudy of Strategic Timing of AntiRetroviral Treatment (START)**

The bone mineral density substudy will determine if early initiation of ART is superior to deferred ART with regards to bone health as measured by annual bone mineral density.

**Status:** Recruitment opened March 2011. To date 13/400 enrolled, with 11 at sites co-ordinated by KI.

**Sites:** 44 with 18 sites co-ordinated by KI (includes pilot sites already open and definitive phase sites)

**Target:** n=400

**Personnel:** Simone Jacoby, Megan Evans, Sally Hough, Joseph Levitt, Sean Emery, Cate Carey, Lara Cassar, Sarah Pett

**Funding:** DAIDS; NHMRC; ANRS, France; BMBF, Germany; NEAT - European AIDS Treatment Network and The National Institute of Arthritis and Musculoskeletal and Skin Diseases, NIH.

**Location:** *Therapeutic and Vaccine Research Program*

### **Liver Fibrosis Progression: A substudy of Strategic Timing of AntiRetroviral Treatment (START)**

The liver fibrosis progression (LFP) substudy will use fibroscan technology to examine the effect of HIV, hepatitis C virus (HCV) and ART on the rates of LFP among ART naive HIV-infected individuals with and without viral hepatitis with CD4+ counts above 500 cells/mm<sup>3</sup>.

**Status:** Protocol release September 2011, recruitment expected to commence towards the end 2011.

**Sites:** Approx. 40 with 13 sites in Sydney

region (includes pilot sites that are already open and definitive phase sites)  
**Target:** n=990 (900 HIV mono-infected and 90 HIV/HCV co-infected)  
**Personnel:** Cate Carey, Megan Evans, Simone Jacoby, Joseph Levitt, Sean Emery, Lara Cassar.  
**Funding:** No additional funding

---

## FLU002

An International Observational Study to Characterize Adults with Influenza A –Pandemic H1N1 (H1N1v) INSIGHT H1N1v Outpatient Study (FLU 002). Note that version 3.0 broadens inclusion to include all influenza subtypes not just H1N1 and the protocol has been renamed *An International Observational Study to Characterize Adults with Influenza*.  
**Status:** Ongoing, globally 2777 participants enrolled  
**Sites:** 85 sites globally; in Sydney region: 23 sites (in Thailand, Argentina, Chile and Australia)  
**Target:** 1895/5000; enrolment in Sydney region n=968  
**Personnel:** Sarah Pett, Sean Emery, David Courtney-Rodgers, David Cooper, Dominic Dwyer, Richard Moore, Tuck Meng Soo, Norm Roth, Mark Bloch  
**Funding:** NIAID

---

## FLU003

An International Observational Study to Characterize Adults Who Are Hospitalized with Complications of Influenza A – Pandemic H1N1 (H1N1v) INSIGHT H1N1v Hospitalization Study (FLU 003) ). Note that version 2.0 broadens inclusion to include all influenza subtypes not just H1N1 and the protocol has been renamed *An International Observational Study to Characterize Adults Who Are Hospitalized with Complications of Influenza*  
**Status:** Ongoing with 810 participants enrolled globally  
**Sites:** 98 globally; 19 in Sydney region (in Thailand, Argentina, Chile, Hong Kong and Australia)  
**Target:** 580/1600; total enrolment; enrolment in Sydney region n=116  
**Personnel:** Sarah Pett, David Cooper, Dominic Dwyer, John McBride, Jenny Hoy, Julian Elliott  
**Funding:** NIAID

---

## FLU004

**Status:** globally 181 enrolled in FLU002 co-enrolled in FLU004; globally 36 enrolled in FLU003 co-enrolled in FLU004

**Personnel:** Sarah Pett, David Cooper, Dominic Dwyer, Richard Moore, Tuck Meng Soo, Norm Roth, Mark Bloch  
**Funding:** NIAID

---

## LASA

A multicenter randomised study to compare the efficacy and safety of lower dose atazanavir/ritonavir (ATV/r 200/100 mg OD) versus standard dose (ATV/r 300/100 mg OD) in combination with 2NRTIs in well virology suppressed HIV-infected adults.  
**Status:** 199/560  
**Sites:** nine clinical centres in the Thai National Health Service network  
**Target:** 560  
**Personnel:** Sean Emery  
**Funding:** Kirby Institute, HIVNAT, Thai NHSO

---

## MARCH

A randomised, controlled trial to evaluate the efficacy and safety of maraviroc as a switch for either nucleoside analogue reverse transcriptase inhibitors (N(t)RTI) or boosted HIV protease inhibitors(r/PI) in HIV infected patients with stable, well-controlled plasma HIV-RNA while taking their first N(t)RTI + r/PI regimen of combination antiretroviral therapy (cART) – The MARCH study.  
**Status:** 400 patients screened and 158 randomised. Expected date of completion August 2015.  
**Sites:** 70 clinical centres in the Kirby international network including Argentina, Australia, Brazil, Canada, Chile, France, Germany, Ireland, Israel, Japan, Mexico, Peru, Spain, UK.  
**Target:** 560  
**Personnel:** Sean Emery, Sarah Pett, Nisha Seneviratne, Elise Tu, Hila Haskelberg, David Silk, Rose Robson, Kymme-Courtney-Vega  
**Funding:** Pfizer/ViiV Healthcare

---

## MARCH CNS substudy

A randomised, open-label study to evaluate the efficacy and safety of maraviroc (MVC) as a switch for either nucleoside or nucleotide analogue reverse transcriptase inhibitors (N(t)RTI) or boosted protease inhibitors (PI/r) in HIV-1 infected individuals with stable, well-controlled plasma HIV-RNA while taking their first N(t)RTI + PI/r regimen of combination antiretroviral therapy (cART). Impairment of neurocognitive (NC) function is a major concern in the

setting of Chronic HIV-1 infection and ways to minimise this are currently being pursued in many different settings. Maraviroc penetrates the CNS and as almost all virus in the brain is R5, the drug may have a potential role in the treatment and/or prevention of impairment of NC function. The randomised arms of MARCH offer an opportunity to explore, in a pilot study, the effects of MVC either partnered with PI/r or NRTI on the CNS.  
**Status:** Currently recruiting.  
**Sites:** 15 clinical centres in the Kirby Institute's international network. Sites located in Australia (n=7), Canada (n=1), France (n=1), Germany (n=2), Israel (n=1), UK (n=3).  
**Target:** 50  
**Personnel:** Nisha Seneviratne, Sarah Pett, Rose Robson  
**Funding:** Kirby Institute

---

## MARCH resistance substudy

A study to explore the prevalence and evolution of HIV drug-resistance using cell associated HIV DNA: The MARCH Resistance Sub-study. Version 0.4, 12 September 2011  
**Status:** Recruitment is underway.  
**Sites:** All sites  
**Personnel:** David Cooper, Sean Emery, Tony Kelleher, Sarah Pett, Elise Tu  
**Funding:** Kirby Institute

---

## MARCH –VE substudy

Maraviroc Switch vascular endothelium substudy: a randomised, open-label study to evaluate the efficacy and safety of maraviroc (MVC) as a switch for either nucleoside or nucleotide analogue reverse transcriptase inhibitors (N(t)RTI) or boosted protease inhibitors (PI/r) in HIV-1 infected individuals with stable, well-controlled plasma HIV-RNA while taking their first N(t)RTI + PI/r regimen of combination antiretroviral therapy (cART). To explore changes in VE as measured by pulse wave tonometry in the MARCH study.  
**Status:** Currently recruiting.  
**Sites:** St. Vincent's Hospital and sites in Argentina, UK, Thailand and Germany, in a total 11 sites.  
**Target:** 75  
**Personnel:** Sarah Pett, Elise Tu, Janaki Amin  
**Funding:** Kirby Institute

---

## MARCH renal substudy

This substudy is a prospective, observational, open-label, randomised

study within the MARCH study exploring changes in protein (UPCR) and albumin (UACR) excretion through the kidneys between the randomised and standard of care (control) arm of MARCH. Secondary objectives are to evaluate the following aspects of renal function at baseline and changes within and between study groups: **Status:** Recruiting. **Sites:** Site survey pending **Target:** 150 **Personnel:** Sarah Pett, David Silk, Janaki Amin David Cooper, Mark Bloch, David Sowden, Mark Kelly, Dominic Dwyer **Funding:** Kirby Institute

## VIRAL HEPATITIS CLINICAL RESEARCH PROGRAM 2012 STUDIES

### ATAHC Recall: Long-term outcomes following treatment of recently acquired hepatitis C virus infection

Hepatitis C virus (HCV) infection is a public health problem, however very little is known about the health of patients years following therapy, and whether HCV treatment at an early stage continues to be beneficial to people. The Australian Trial in Acute Hepatitis C (ATAHC) previously enrolled 163 subjects with recent (ie acute or early chronic) HCV infection between 2004 and 2008. Uptake of treatment was high, with 79% initiating therapy. Follow-up was maintained for up to two years post SVR with continued specimen and data collection, with seven reinfections observed during this time. The study closed in 2007 and the original subjects are now an average of 5.6 years from initial infection. The ATAHC study demonstrated the successful recruitment, engagement and early follow-up of one of the largest cohorts of individuals with AHC and established an extensive serum, plasma and PBMC storage banks of AHC worldwide. Longitudinal follow-up will allow for the first international, long-term assessment of clinical, social, behavioural, psychological and immunovirological outcomes following recently acquired HCV. **Status:** Ongoing. **Personnel:** Gail Matthews, Greg Dore, Sofia Barlett, Amanda Erratt, Jason Grebely, Pip Marks, Francois Lamoury, Austin Butcher, Margaret Hellard, Joseph Doyle, David Shaw **Collaborating centres:** St Vincent's Hospital, Sydney; The Alfred Hospital, Melbourne; Royal Adelaide Hospital, Adelaide **Funding:** St Vincent's Hospital Research Foundation

### DARE-C: Direct Acting Antiviral (DAA) based therapy for recently acquired hepatitis C

Future therapy for the treatment of individuals with chronic HCV will involve directly acting antiviral agents, with or without pegylated interferon (PEG-IFN)/ribavirin (RBV). In early chronic HCV infection (duration less than 18 months) treatment responses are generally very good and individuals often keen to be treated. The use of short course triple therapy including telaprevir (TVR) in this setting warrants evaluation. ATAHC II study is examining a broad strategy of individualisation of duration of PEG-IFN/RBV therapy based on early response in acute and early chronic HCV infection across all genotypes and HIV status. The sub-study DARE-C aims to evaluate individualisation of therapy duration using triple therapy (PEG-IFN/RBV/TVR) in a subgroup of ATAHC II subjects with genotype 1 infection and early chronic HCV infection. **Status:** Ethics and regulatory approval for St Vincent's Hospital are expected by the end of 2012 and the first patient visit is expected for January 2013. **Personnel:** Austin Butcher, Gail Matthews, Sophie Quiene, Ineke Shaw, Greg Dore, Pip Marks, Barbara Yeung, Mahshid Tamaddon **Collaborating centres:** St Vincent's Hospital Sydney, The Alfred Hospital and Royal Adelaide Hospital. **Funding:** Janssen

### ACTIVATE – Response Guided Treatment for Patients with Chronic HCV Infection and Ongoing Injection Drug Use

This is a phase IV, open-label, multicentre, international trial of response guided treatment with directly observed pegylated interferon alfa 2b and self-administered ribavirin for patients with chronic HCV genotype 2 or 3 infection and ongoing injection drug use. The primary objective is to evaluate the proportion of patients with sustained virological response at 24 weeks post end of treatment (SVR24) following directly observed pegylated interferon alfa 2b and self-administered ribavirin for 12 weeks in participants with undetectable HCV RNA at week four of therapy, and for 24 weeks in participants with detectable HCV RNA at week four of therapy. The study will be conducted in Australia, Canada, United Kingdom,

Germany, Switzerland, France, Belgium, Norway and Finland.

**Status:** Open to recruitment at 13 sites in six countries. A further four sites to be opened in the first half of 2013.

**Enrolled:** 11 patients at 31 December 2012. The accrual target is 100 patients by 31 December 2013.

**Personnel:** Greg Dore, Pip Marks, John Morrison, Marianne Byrne

**Collaborating centres:** St Vincent's Hospital, NSW, Burnet Institute, Alfred Hospital, VIC  
Royal Adelaide Hospital, SA, Hunter Pharmacotherapy, John Hunter Hospital, NSW, Nepean Hospital, NSW, Vancouver Infectious Diseases Centre, Canada; Centre Hospitalier de l'Universite de Montreal (CHUM), Canada; East Toronto Hepatitis C Program, Canada; ARUD, Poliklinik Zokl 1, Zurich, Switzerland; Zentrum fur Suchtmedizin, Basel, Switzerland; Koda Bern/Poliklinik fur Infektiologie, Switzerland; ZNA Stuivenberg and Free Clinic, Antwerp, Belgium; Ziekenhuis Oost Limburg and MSOC, Genk, Belgium; Leppavaarankatu 10 Espoo, Finland; Praxiszentrum Im Tal (PIT); Ludwig-Maximilians-Universitat Munich, Germany; CONCEPT Center for Addiction Treatment Munich, Germany; Oslo University Hospital, Norway; Barts and the London Queen Mary's School of Medicine and Dentistry, United Kingdom; Nottingham University Hospital, United Kingdom.

**Funding:** Merck Sharpe and Dohme

### GP Pilot-Enhanced Treatment for Hepatitis C in Primary Care Settings

This is a prospective observational cohort study, aiming to evaluate the feasibility, safety and efficacy of a primary care based model for the delivery of HCV services, including initiation of anti-viral therapy. Those subjects that commence treatment will be followed until 24 weeks post treatment (SVR). The cohort will be recruited through a network of primary care clinics undertaking HCV assessment, treatment and monitoring.

**Status:** All study sites open. Ongoing recruitment through five sites in New South Wales

**Enrolled:** 39 patients enrolled.

**Personnel:** Greg Dore, Pip Marks, Amanda Erratt

**Collaborating centres:** Australasian Society for HIV Medicine (ASHM); National Centre in HIV Social Research (NCHSR); East Sydney Doctors, Darlinghurst; Clinic 96, Orange; Hunter Pharmacotherapy Services, Newcastle; The Byrne Surgery, Redfern; Cowra

Medical Associates, Cowra; Asquith Medical Centre, Asquith; Dr Doong's Surgery, Burwood.  
**Funding:** Australasian Society for HIV Medicine (ASHM)

### Morbidity in people with hepatitis B and C in New South Wales

Understanding hepatocellular carcinoma (HCC) in NSW. This was a population-based data linkage study. Notification records for cases of hepatitis B and/or hepatitis C in New South Wales were linked to their hospital, death, and HIV/AIDS records by The Centre for Health Record Linkage (CHeReL). Statistical methods to account for within patient clustering were employed

**Status:** Analyses on the epidemiology and natural history (including morbidity and mortality) of HCC and viral hepatitis are ongoing.

**Personnel:** Rosie Thein, Greg Dore, Jason Grebely, Maryam Alavi, Janaki Amin, Heather Gidding, Matthew Law  
**Collaborating centres:** Kate Ward (NSW Health)

**Funding:** The Cancer Council NSW

### Australian Trial in Acute Hepatitis C (ATAHC II)

A prospective longitudinal study of natural history and treatment outcomes following response guided treatment of recent hepatitis C infection.

**Status:** All study sites have received ethics and research governance approval and all open to recruitment.

**Enrollment target:** 120 subjects

**Personnel:** Gail Matthews, Greg Dore, Barbara Yeung, Pip Marks, Jason Grebely, Tanya Applegate, Margaret Hellard (the Burnet Institute and the Alfred Hospital), David Shaw (Royal Adelaide Hospital), Paul Haber (Royal Prince Alfred Hospital), Andrew Lloyd (UNSW), Alex Thompson (St. Vincent's Hospital, VIC), David Iser (St. Vincent's Hospital and the Alfred Hospital, VIC), Joe Sasadeusz (Royal Melbourne Hospital), Silvana Gaudieri (Royal Perth Hospital and Murdoch University, WA)

**Collaborating centres:** St. Vincent's Hospital, Sydney, Royal Prince Alfred Hospital, Kirketon Road Centre and Nepean Hospital in NSW, The Alfred Hospital, Royal Melbourne Hospital and St. Vincent's Hospital, Melbourne in VIC, Royal Adelaide Hospital in SA and Princess Alexandra Hospital in QLD.

**Funding:** US National Institutes of Health

### Enhancing Treatment of Hepatitis C in Opiate Substitution Settings (ETHOS)

The Kirby Institute was awarded an NHMRC Partnership Grant (partner organisations listed below) to address the issue of HCV treatment in the opiate pharmacotherapy setting. Among patients with a history of injection drug use, the specific objectives of this study are to examine:

1. Assessment and treatment of HCV in a prospective cohort study – the ETHOS Cohort.
2. Patient and provider attitudes and barriers towards the provision of services for assessment and treatment of HCV infection.
3. Peer based support as a strategy for enhancing knowledge and uptake of treatment for HCV infection.
4. Cost effectiveness of providing assessment and treatment for HCV infection in the opiate pharmacotherapy setting.

**Status:** Closed to recruitment. There are currently 438 participants enrolled in the ETHOS Cohort and 77 on treatment. Follow-up of participants will continue until mid-2014

**Target:** 500

**Personnel:** Greg Dore, Jason Grebely, Pip Marks, Michelle Micallef

**Collaborating centres:** National Centre in HIV Social Research (NCHSR); NSW Department of Health; Sydney Local Health District; Hepatitis C Council of NSW; NSW Users and AIDS Association (NUAA); Discipline of Addiction Medicine, The University of Sydney and Australian Injecting and Illicit Drug Users League (AIVL).

**Funding:** Australian Government Department of Health and Ageing and NSW Health Department.

### Defining Risk and Mechanism of Per mucosal Transmission for acute HCV Infection within high-risk populations (RAMPT-C Study)

The study aims to characterise per mucosal transmission of HCV among HIV-positive and HIV-negative MSM, through clinical and molecular epidemiological analysis, with qualitative socio-behavioural and biological studies to explore the transmission mechanisms. The Study consists of three parts: Part I – Phylogenetics analysis, Part II – semen analysis, and Part III – Behavioural mechanism interview. An eligible

patient can participate in Part I only or all three parts.

**Status:** ongoing;

**Personnel:** Gail Matthews, Greg Dore, Pip Marks, Tanya Applegate, Amanda Erratt, Dan Bradshaw.

**Collaborating centres:** Macfarlane Burnet Institute for Medical Research and Public Health, VIC; St Vincent's Hospital, NSW.

**Funding:** National Health and Medical Research Council Project Grant and St. Vincent's Clinic Foundation Research Grant

### The Healthy Liver Campaign

This study is to evaluate the impact of a Healthy Liver Campaign on HCV knowledge, assessment and treatment among people attending OST clinics. Among people attending OST clinics, the aims of the study are to assess knowledge of liver disease and associated factors; assess willingness and barriers to receiving assessment for liver disease and associated factors; evaluate the impact of a Healthy Liver Campaign on knowledge of liver disease, liver disease assessment and uptake of interventions; and develop guidelines for liver disease and FibroScan assessment in the OST setting.

**Status:** Ongoing.

**Target:** 480

**Personnel:** Greg Dore, Jason Grebely, Pip Marks, Michelle Micallef

**Collaborating centres:** National Centre in HIV Social Research (NCHSR); Centre for Health Initiatives, University of Wollongong; Australian Injecting and Illicit Drug Users League (AIVL); Hepatitis C Council of NSW and NSW Users and AIDS Association (NUAA)

**Funding:** Schering Plough and University of NSW Major Research Equipment and Research Infrastructure (MREII) grant

### LABORATORY SERVICE AND SUPPORT

#### HepBank Clinical Sample Repository & Open Access Substudy database (LabKey)

Samples are stored in -80°C freezers (monitored by alarms 24/7) and Vapour Phase Tanks at St Vincent's Centre for Applied Medical Research, Lowy Packer Building in Darlinghurst. The repository stores serum, plasma, PBMC, DNA and semen samples collected during HREC VHCRP approved clinical trials, research

projects or clinic visits from patients with hepatitis B or C including those co-infected with HIV. Several processes determine the allocation of samples from Hepbank to be used for a laboratory research sub-study project, including a review of sample criteria availability, protocol steering committee (PSC) approval of investigator driven concept sheets, HREC approval for all sites participating in the study and a Letter of Understanding (LOU) between the PSC and the research site. The sample repository is managed by HIVIRL, an Oracle database developed by Tony Kelleher's laboratory, which is interfaced with the LabKey database. The web-based LabKey database links existing clinical, sample repository and laboratory data-sets to allow comprehensive analysis of clinical trial results. This provides an invaluable group of samples to be used for Hep C related laboratory research.

**Status:** Samples from new VHCRP trials are being added to the repository. The Live Labkey site is now in official use with several central laboratories using the offsite repository function to enter specimen data for samples collected from VHCRP clinical trials. This enables real time analysis of patient sample data and improves efficiency in data collection for both the central laboratory and VHCRP.

**Personnel:** Austin Butcher, Sofia Bartlett, Ineke Shaw, Pip Marks, Trent Schafer, Brendan Jacka, Tanya Applegate, Ansari Shaik, Tony Kelleher  
**Funding:** NHMRC Program Grant and UNSW Major Equipment Research funding

**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

## ASSAY DEVELOPMENT

### Assays of T-cell function, proliferation and cytotoxicity, and identification of antigen-specific T-cells

A range of flow cytometric assays for assessing CD4+ and CD8+ T-cell function are worked up in the laboratory. The measures of antigen-specific T-cells include T-cell proliferation, activation and cytokine secretion. Such assays are important for understanding HIV pathogenesis and in responses to vaccines, and therefore are included in the protocols of clinical trials and natural history studies carried out by the Kirby Institute. Assays were performed as part the PINT trial of therapy with the

integrase inhibitor, Raltegravir and the Restore and PrIRIS studies in Bangkok and Sydney respectively. Other studies were conducted as part of the PHIIDO observational study of primary HIV infection. These assays were validated in the context of two completed clinical studies assessing latent TB infection in Bangkok and Sydney; in a clinical study of CMV re-activation and Adenovirus infection following paediatric bone marrow transplantation, and in following immune responses with gluten induced flares of coeliac disease. Assays were also conducted to elucidate the generation of CD4+ T-cell responses during primary vaccinia vaccination.

**Status:** Continued analysis of samples from PHAEDRA and the long-term non-progressor cohorts, TB studies completed, Studies of CMV disease to be completed in 2011 and coeliac study commenced.

**Personnel:** Susanna Ip, Laura Cook, Mee-Ling Munier, Michelle Bailey, Yin Xu, Chansavath Phetsouphanh, Celine Yan, Anthony Kelleher, Denise Hsu  
**Collaborating centres:** John Zaunders, Mahila Namasivayam, Tony Walls, John Ziegler, Nabila Seddiki, Stephen Kent, Bob Anderson, Jason Tye-Din, Jintanat Ananworanich, Sasiwimol Ubolyam, Anchalee Avihingsanon, Kiat Ruxrungham, Praphan Phanuphak  
**Funding:** NHMRC, St Vincent's Hospital, Coeliac Foundation

**Co-located:** *Viral Hepatitis Clinical Research Program and Immunovirology and Pathogenesis Program*

### Development of research tools to assess host and viral genetic variations

To develop affordable assays to support host genetic and viral phylogenetic studies.

**Status:** Ongoing.

**Personnel:** Francois Lamoury, Brendan Jacka, Sofia Bartlett, Tanya Applegate  
**Collaborating centres:** Philip Cunningham, Alex Carrera  
**Funding:** NHMRC Program Grant  
**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

### Development of new therapeutic modalities

**HIV drug resistance and viral tropism**  
This project involves the development of expertise in the application of a number of methods of detecting antiretroviral drug resistance through genotypic testing

of HIV isolates. There are three major projects: evaluation and conducting commercially available genotype testing for protease, reverse transcriptase regions; development of a new, cheap in-house genotyping method from blood dry-spots as a starting material, ; and developing assays for the determination of CCR5 tropism of patient's HIV isolates. More than 700 HIV-1 resistance genotypes have been performed based on the commercial based resistant assays. Validation of new in-house genotyping method is close to completion.. The CCR5 tropism assay for RNA has been transferred to the NSW State reference laboratory at St Vincent's and is being used for routine care.

**Status:** The validation of the DNA version of this assay is complete and is being used for routine patient care from January 2012.

**Personnel:** Anthony Kelleher, Celine Yan, Kerstin Koelsch, Yong Pan

**Collaborators:** Kazuo Suzuki, Kat Marks, Nick Rismanto, Philip Cunningham, Leon McNally, Alexander Carrera

**Funding:** NSW Health Department, ViiV  
**Co-located:** *Viral Hepatitis Clinical Research Program and Immunovirology and Pathogenesis Program*

### RNA inducing viral latency

This project is related to siRNA gene silencing for HIV-1 and SIV infection. siRNAs targeting viral promoter DNA region induce transcriptional gene silencing (TGS) of viral genes in infected cells. The study has been extended to two major objectives: To develop and evaluate delivery systems including lentiviral and non-viral systems for use in a humanised mouse HIV-1 infection model; and to define the pathways by which dsRNAs targeting the promoter regions of HIV-1 and SIV. Silencing constructs applicable for use in HIV-1 infection have been development. These constructs have been incorporated into a lentiviral delivery system, which will be assessed *in vitro*. Epigenetic changes induced by siRNAs targeting HIV-LTR will also be defined. We also investigated the subcellular localisation of Argonaute proteins (Ago) during the TGS process and recently reported the presence of Ago1 in the nucleus and Ago2 in the nuclear membrane as demonstrated by confocal microscope using tagged Ago1/Ago2 and fluorescently labelled siRNA. We also demonstrated colocalisation between Ago1 or Ago2 and F-actin and are currently following up of this novel finding to potentially link transport of the

molecules from the cytoplasm into the nucleus where they would then act on the HIV-1 promoter to initiate gene silencing.

**Status:** Ongoing

**Personnel:** Anthony Kelleher, Chantelle Hood, Sanjay Swaminathan

**Collaborators:** Kazuo Suzuki, Takaomi Ishida, Makoto Yamagisi, Toshiki Watanebe

**Funding:** NHMRC

**Co-located:** *Viral Hepatitis Clinical Research Program and Immunovirology and Pathogenesis Program*

## TRANSLATIONAL RESEARCH: HOST

### In-vivo hepatitis C virus adaptation to host in recently acquired HCV (ATAHC)

To characterise HCV adaptation to HLA-restricted immune response and examine the influence of HLA alleles on HCV sequence evolution and escape mutations.

**Status:** Ongoing

**Personnel:** Greg Dore, Gail Matthews

**Collaborating centres:** Simon Malal and Silvana Gaudieri (CCiBS, Perth) and Andrew Lloyd (UNSW)

**Funding:** National Institute of Health

**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

### IP10, IL28B serum protein levels and T-cell responses in recently acquired HCV (ATAHC)

Analysing serum IP-10 and IL28B protein levels (by ELISA) as a marker of spontaneous and treatment-induced clearance during early HCV infection.

**Status:** Ongoing

**Personnel:** Jason Grebely, Tanya Applegate, Greg Dore, Gail Matthews

**Collaborating centres:** Jordan Feld (Toronto University, Canada), Andrew Lloyd (UNSW), Jacqueline Flynn and Rosemary Ffrench (Burnet Institute, Victoria)

**Funding:** National Institute of Health, NHMRC Program Grant

**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

### Investigation of the association between ITPA polymorphism, on-treatment anemia and treatment outcome in the CHARIOT cohort

This study is designed to evaluate the association between the ITPA polymorphisms rs1127354 and rs7270101, and on-treatment anaemia, RBV dose reduction and rate of SVR in the CHARIOT cohort.

**Status:** Ongoing

**Personnel:** Greg Dore, Gail Matthews, Pip Marks, Sofia Bartlett.

**Collaborating centres:** Alex Thompson (St Vincent's Hospital, Melbourne) and CHARIOT PSC

**Funding:** St Vincent's Hospital Sydney, Roche Products Pty Ltd

**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

### A study of the relationship between vitamin status and the severity of liver disease and outcomes of the treatment with Pegylated interferon alfa 2A plus Ribavirin in Hepatitis C Genotype 1 infected patients

This study is designed to evaluate serum vitamin d levels and the relationship between vitamin d and histologic disease severity in hcv genotype 1 patients with biopsy proven CHC from the CHARIOT study.

**Status:** Ongoing

**Personnel:** Greg Dore, Pip Marks, Sofia Bartlett.

**Collaborating centres:** Stuart Roberts, Matthew Kitson.

**Funding:** The Alfred Hospital, Melbourne, Roche Products Pty Ltd

**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

### Role of host genetics in chronic HCV combination treatment response

To identify a combination of baseline covariates, serum protein markers and host genetic markers to develop a treatment algorithm to predict the response rate of each patient considering treatment for CHC.

**Status:** Ongoing

**Personnel:** Greg Dore, Pip Marks, Sofia Bartlett, Tanya Applegate.

**Collaborating centres:** Jacob George, Stuart Roberts.

**Funding:** Roche Products Pty Ltd

**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

## TRANSLATIONAL RESEARCH: VIRAL

### RADAR: Resistance Against Directly Acting Antivirals in Australian Trial in Acute Hepatitis C, (ATAHC)

Identification of the prevalence of pre-existing resistance mutations within the ATAHC cohort in treatment naïve patients, to Polymerase and Protease Inhibitors using Deep Sequencing analysis.

**Status:** Ongoing

**Personnel:** Gail Matthews, Tanya Applegate, Greg Dore

**Collaborating centres:** Silvana Gaudieri

**Funding:** NHMRC Project Grant, NHMRC Program grant

**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

### Characterisation of reinfection/mixed HCV infection in recently acquired HCV (ATAHC)

Analysis of the prevalence and impact of HCV reinfection and mixed infection using novel real time PCR (MNAzyme) technology, direct sequencing and genotype specific PCR.

**Status:** Ongoing

**Personnel:** Brendan Jacka, Tanya Applegate, Jason Grebely, Greg Dore, Gail Matthews

**Collaborating centres:** Sean Pham & Peter White (UNSW, Sydney), Alison Todd & Elisa Mokany (SpeedX Pty Ltd, Sydney).

**Funding:** National Institute of Health, NHMRC Program Grant, Australian Postgraduate Award

**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

## TRANSMISSION RESEARCH

### ITHACA: Investigating Transmission Dynamics of HCV Among injecting drug users in Canada and Australia

**Status:** The goal of this project is to evaluate HCV transmission dynamics among people who inject drugs (PWID). First, we are interested in how HCV is transmitted from older to younger PWID and whether public health initiatives have led to a reduction in transmission. Second, we are interested

in understanding how frequently reinfection and mixed infections with HCV occur and what characteristics are associated with reinfection/mixed infections. We plan to conduct this study within well-established cohorts of PWID in Vancouver, the Vancouver Injecting Drug Users Study (VIDUS) and the At-risk Youth Study (ARYS). Ethics approval is expected from the UBC Providence Health Care Ethics Committee in Canada during 2012. Ethics is currently being sought for work to be done in Australia.

**Status:** Ongoing

**Personnel:** Jason Grebely, Tanya Applegate, Brendan Jacka, Greg Dore, Francois Lamoury, Gail Matthews

**Collaborating centres:** Mel Krajden (British Columbia Centre for Disease Control), Evan Wood, Thomas Kerr, Richard Harrigan, Art Poon (British Columbia Centre for Excellence in HIV and AIDS), Zabrina Brumme (Simon Fraser University), Jesse Raffa (University of Waterloo), Brandon Marshall (Brown University), Silvana Gaudieri (University of Western Australia)

**Funding:** The Canadian Institutes for Health Research

**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

### Transmission networks in recently acquired HCV in ATAHC

Explore clinical and molecular epidemiology of HCV transmission networks in HIV +/- population and assess if networks bridging into HIV-communities through phylogenetic and molecular clock analysis of HCV sequences.

**Status:** Ongoing

**Personnel:** Gail Matthews, Tanya Applegate, Greg Dore, Jason Grebely

**Collaborating centres:** Sean Pham, Fabio Luciani, Peter White, Lei Zhang

**Funding:** National Institute of Health, NHMRC Program Grant

**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

### THERAPEUTIC RESEARCH

#### Ribavirin concentrations in subjects with chronic HCV (CHARIOT)

Determinants of plasma ribavirin

concentration during the first 12 weeks of therapy in CHC genotype 1 patients treated within the CHARIOT study.

**Status:** Ongoing

**Personnel:** Gail Matthews, Ineke Shaw, Rachel Ali, Greg Dore

**Collaborating centres:** John Ray (St Vincent's Hospital)

**Funding:** St Vincent's Hospital Sydney, Roche Products Pty Ltd

**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

#### RAMPT-C cohort

Defining risk and mechanisms of permucosal transmission for acute HCV infection MSM and IDUs within high-risk populations. This includes analysis of transmission events through HCV sequencing, biological and behavioural mechanisms in incident cases.

**Personnel:** Gail Matthews, Barbara Yeung, Amanda Erratt, Tanya Applegate, Brendan Jacka, Greg Dore

**Collaborating centres:** Mark Danta, Margaret Hellard, Rose Ffrench, Kylie Goy

**Funding:** NHMRC Project Grant  
**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

#### SEARCH-C: surveillance for Antiviral Resistant variants in chronic hepatitis C patients

There remains a number of critical data gaps in understanding the clinical significance of HCV resistance associated variants: There has been no detailed deep sequencing analysis of the association between baseline RAVs and the outcomes of DAA-treatment regimens; no "real world" data has investigated the relationship between treatment adherence and selection of RAVs; the data is very limited data on the natural history / potential pathogenicity of these RAVs that are selected in patients who fail antiviral therapy; and no data exist concerning whether the selection of HCV resistance-associated variants with first-generation DAA-based regimens may compromise future treatment options.

**Status:** Ongoing; no enrolments to date.

**Personnel:** Gail Matthews, Greg Dore, Amanda Erratt, Pip Marks, Francois Lamoury, Sofia Bartlett, Austin Butcher, Alex Thompson

**Collaborating centres:** St Vincent's Hospital, Sydney; St Vincent's Hospital Melbourne.

**Funding:** Kirby Institute

**Co-located:** *Viral Hepatitis Clinical Research Program (laboratory program) and Immunovirology and Pathogenesis Program*

### VIRAL HEPATITIS EPIDEMIOLOGY AND PREVENTION PROGRAM 2012 STUDIES

#### The Australian needle and syringe program survey (ANSPS)

The Australian Needle and Syringe Program Survey (ANSPS) forms the basis of Australia's sentinel surveillance of HIV and hepatitis C virus (HCV) prevalence and behaviour indices of risk among people who inject drugs (PWID). Since 1995, all clients attending selected Needle and Syringe Program (NSP) sites during a specified one to two week period are asked to complete a brief self-administered questionnaire and to provide a capillary blood sample for HIV and hepatitis C antibody testing. Demographic and behavioural data captured include injecting and sexual behaviour, blood borne virus testing, drug treatment and needle and syringe acquisition. A National Data Report, summarising national and state/territory data is produced by VHEPP on an annual basis.

**Status:** Ongoing

**Personnel:** Jenny Iversen, Lisa Maher

**Collaborators:** Australian State and Territory health authorities; the Collaboration of Australian Needle and Syringe Programs; St Vincent's Centre for Applied Medical Research (AMR) and NSW State Reference Laboratory for HIV at St Vincent's Hospital; Association for Prevention and Harm Reduction Programs Australia (ANEX); Australian Injecting and Illicit Drug Users' League (AIVL); National Drug Research Institute (NDRI); Drug and Alcohol Service, St Vincent's Hospital.

**Funding:** Australian Government Department of Health and Ageing

#### Hepatitis acceptability and vaccination incentives trial (HAVIT)

Injecting drug use is the leading exposure for newly acquired hepatitis B virus (HBV) infection in Australia, yet vaccination uptake and coverage among



people who inject drugs (PWID) remains low. The trial aimed to determine the efficacy of financial incentives in increasing hepatitis B vaccine completion among PWID. Secondary endpoints included cost effectiveness and correlates of immunity. HAVIT was the first head-to-head comparison of incentives paid on a per-dose basis versus no incentives in increasing vaccination completion in the world. Results indicate that PWID allocated to the incentive condition were more than three times more likely to complete the schedule. Findings suggest that the provision of modest financial incentives to PWID for hepatitis B vaccination completion is a realistic public health strategy with the potential to reduce the burden of HBV disease and, potentially, other vaccine-preventable infections in this group.

**Status:** 139 PWID completed the experimental procedures; follow up data collection completed.

**Personnel:** Rachel Deacon, Mofizul Islam, Libby Topp, Lisa Maher

**Collaborating centres:** Kirketon Road Centre, South Eastern Sydney and Illawarra Area Health Service; Sydney South West Area Health Service; Redfern Drug Health Service, South West Sydney Area Health Service; Discipline of Addiction Medicine, University of Sydney; National Drug and Alcohol Research Centre

**Funding:** NHMRC Project Grant

---

### Hepatitis C vaccine preparedness studies

This program of work, which commenced in 2010, continues and extends earlier work conducted under the UNSW HCV Vaccine Initiative. The project aims to establish the feasibility of conducting efficacy trials of candidate HCV vaccines with PWID by answering key scientific questions, building community capacity and establishing the necessary infrastructure to conduct future trials. Specific aims are to 1) determine HCV incidence and spontaneous clearance in a prospective cohort of uninfected PWID; 2) identify associated risk factors; 3) evaluate retention strategies and factors associated with adherence to the study protocol; and 4) investigate immunisation acceptability, clinical trial literacy and willingness to participate in future vaccine trials in this group. The project includes the Hepatitis C Incidence and Transmission Study – community (HITS-c), an ongoing prospective observational study of HCV antibody negative PWID. By 2011, 150 PWID were

enrolled and retention at 12 months was 86%. A total of 17 incident cases of HCV infection have been observed (9.3/100py; 95% CI 5.8-14.9).

**Status:** By the end of September 2012, 176 PWID were enrolled and retention at 12 months was 85%. A total of 26 incident cases of HCV infection have been observed.

**Personnel:** Anna Bates, Jarliene Enriquez, Sammy Chow, Jessica Jia, Len Liao, Bethany White, Sarah Wright, Lisa Maher

**Collaborating centres:** Academic Medical Centre, University of Amsterdam and Infectious Disease Cluster, Amsterdam Public Health Service; Australian Intravenous and Injecting League (AIVL); Hepatitis Australia; Hepatitis C Council of NSW; Inflammatory Diseases Research Unit, School of Medical Sciences, UNSW; SEALS Microbiology, Prince of Wales Hospital; Burnet Institute; British Columbia Centre for Excellence in HIV/AIDS; University of California San Francisco.

**Funding:** NHMRC Project Grant

---

### Economic, social and cross-cultural issues in non-pharmaceutical protection of front line responders to pandemic influenza and emerging infections

Non-pharmaceutical interventions such as face masks are one of the few widely available strategies that can be offered to front line health care workers (HCW) in outbreak situations and that can be guaranteed to be available regardless of the type of infection. The aims of this study are: to determine knowledge, attitudes and practices of HCW related to infection control and barriers to adherence to mask use; to conduct a cluster randomised trial in frontline health care workers in Hanoi in order to determine the efficacy of surgical and cloth masks against influenza and other respiratory viruses; to compare knowledge, attitudes and practices of frontline HCW in Australia and Vietnam, and identify both culturally specific and universal issues that may affect behaviour in an emergency; to model the cost-effectiveness of surgical and N95 face masks; and to inform disease control policy nationally and internationally on the use of face masks in the control of pandemic influenza, emerging infections or a bioterrorist attack.

**Status:** Fifteen hospitals involving 1,606 HCW were enrolled and the trial was

completed in 2012. Data are currently being analysed.

**Personnel:** Lisa Maher

**Collaborating centres:** School of Public Health and Community Medicine, UNSW (lead); Imperial College London, Faculty of Medicine; National Institute of Hygiene and Epidemiology (NIHE), Hanoi; Westmead Hospital, Sydney.

**Funding:** Australian Research Council

---

### Staying safe: How do long-term injecting drug users avoid hepatitis C infection?

Building on data collected from established longitudinal cohort of PWID, this project is focussed on developing hepatitis C virus (HCV) prevention programs to assist both new and experienced PWID to develop and implement strategies to remain uninfected with HCV. Through collaborations with Harm Reduction Victoria and the Centre for Population Health at Burnet Institute, data collected from this project is also being used to assist people who are infected with HCV but who clear the virus to continue to inject to avoid re-infection. In-depth interview data allows comparisons of PWID who have acquired HCV and those who have not ensuring utility for all PWID.

**Status:** Completed.

**Personnel:** Peter Higgs, Lisa Maher

**Collaborating centres:** The Centres for Population Health, Burnet Institute; Harm Reduction Victoria.

**Funding:** NHMRC

---

### Staying safe Sydney

This study aims to explore the social practices and conditions associated with long term avoidance of hepatitis C virus infection. During 2011 a further 12 participants from South West Sydney were recruited into Stage Two. Initial interviews explored participants' life histories, focussing on constructing a 'timeline' which was later reproduced graphically using 'Timeline Maker Professional' software. Follow-up interviews focused on drug use over time and place with the 'timeline' serving as a prompt. Data from the 23 completed interviews is being coded using 'NVivo9' software, using the coding frame constructed during Stage One of the project.

**Status:** This study was completed in 2012

**Personnel:** Lisa Maher, Carla Treloar,

Jake Rance, Magdalena Harris

**Collaborating centre:** National Centre for HIV Social Research.

**Funding:** UNSW

---

### **An ethno-epidemiological investigation of social and environmental contexts of HIV vulnerability among injection drug users**

By combining ethnographic and epidemiological methods this project seeks to develop an ethno-epidemiological model of HIV vulnerability among PWID. Ethnographic methods are used to generate empirical information regarding key transitional events and social contexts within the lives of PWID and how these shape HIV risks. These ethnographic research activities are integrated with a broad program of social epidemiology, including ongoing epidemiological cohort studies. This design permits identification of cohort participants undergoing key transitions for targeted in-depth interviews, as well as examination of hypotheses regarding the relationship between HIV vulnerabilities and particular social contexts (e.g. street-based drug markets and sex work environments).

**Status:** Completed in August 2012

**Personnel:** Will Small, Lisa Maher  
**Collaborators:** Urban Health Research Institute, British Columbia Centre for Excellence in HIV/AIDS.

**Funding:** Canadian Institutes of Health Research Post Doctoral Fellowship; Michael Smith Foundation for Health Research Post Doctoral Fellowship

---

### **Exploring the natural history of injection drug use: A qualitative study of social and environmental influences in the VIDUS cohort**

This study seeks to: (1) examine the influence of social and environmental factors on critical initiation and transitional events among street youth and adults who inject drugs, including transitions in drug use, initiation into drug scenes and sex work; (2) examine the influence of social and physical contexts within 'drug scenes' on HIV risk behaviour; (3) refine and document an evolving ethno-epidemiological approach to investigating the natural history of injection drug use. The study employs observational ethnographic activities, in-depth interviews, mapping techniques, photography, and epidemiological data. Observational activities will be conducted in settings where illicit drugs are consumed. Qualitative in-depth interviews will be conducted with individuals who are members of existing cohort studies, and will utilise a

longitudinal perspective through annual follow-up of participants.

**Status:** Completed.

**Personnel:** Will Small, Lisa Maher  
**Collaborators:** British Columbia Centre for Excellence in HIV/AIDS, Vancouver (lead)

**Funding:** Canadian Institutes of Health Research

---

### **Relative efficacy of cash versus vouchers in engaging people who inject drugs (PWID) in research**

Ethical concerns around reimbursing PWID for research participation have focussed on the potential for cash payments to precipitate drug use. In an effort to overcome perceived ethical complexities, some protocols instead reimburse participants with vouchers rather than cash. This study employed a crossover design at two opioid substitution therapy (OST) clinics. At Time 1, researchers located in each clinic invited OST clients to participate in a survey about alcohol use. Four months later (Time 2), the same protocol was implemented in the same two clinics. However, at Time 1, Clinic 1 offered \$20 cash as reimbursement while Clinic 2 offered a \$20 voucher. At Time 2, the form of reimbursement was reversed, with Clinic 1 offering the voucher, and Clinic 2 offering cash. The main outcome of interest in this study was the proportion of participants willing to participate for cash versus voucher reimbursement. Results indicated that, as expected, participation rates were significantly higher when clients were offered cash than when they were offered vouchers.

**Status:** Round 1 data collection completed in July 2011; round 2 completed in November 2011. Data entry, cleaning and analysis completed in February 2012.

**Personnel:** Mofizul Islam, Rachel Deacon, Libby Topp, Carolyn Day  
**Collaborating centre:** Discipline of Addiction Medicine, University of Sydney  
**Funding:** UNSW Faculty of Medicine Faculty Research Grant

---

### **Assessment and prevention of injection-related injury and disease (IRID) among people who inject drugs**

Injecting-related injury and disease (IRID) is a significant health issue among PWID. This study aims to identify prevalence (lifetime and recent) of IRID and associated risk factors among PWID attending the Kirketon Road Centre

(KRC) and to develop and evaluate an intervention to prevent and treat IRID in this group. A clinician-administered screening tool was developed and integrated into routine alcohol and other drug assessment for PWID first attending KRC. The intervention consisted of specific safer injecting messages provided by clinicians at the point of venepuncture to screen for blood borne infections. A survey to assess baseline injecting knowledge and practices was conducted prior to, and following receipt of, the intervention.

**Status:** Evaluation underway

**Personnel:** Mihaela Ivan, Lisa Maher  
**Collaborators:** Kirketon Road Centre, South Eastern Sydney Local Health District.

**Funding:** NSW Ministry of Health Mental Health and Drug and Alcohol Office (MHDAO)

---

### **Examination of injecting drug use life course and estimating prevalence and health consequences of a dynamic population**

This project examines longitudinal datasets of injecting drug users from the UK (e. g. Edinburgh Addiction Cohort Study) and Australia (e. g. Hepatitis Incidence and Transmission Study) taking into account periods of injecting and non-injecting. This will allow for more valid projections of injecting drug use health consequences and associated health impacts and costs of interventions.

**Status:** Completed

**Personnel:** Lisa Maher  
**Collaborators:** University of Bristol; MRC Biostatistics Unit, Cambridge; Muirhouse Medical Group, Edinburgh; London School of Hygiene and Tropical Medicine

**Funding:** NHMRC (Sidney Sax) Training Fellowship

---

### **The role of resiliency in responding to blood-borne viral and sexually transmitted infections in Indigenous communities**

A collaborative project between Australia, Canada and New Zealand to examine resilience to blood-borne viruses (BBVs) and sexually transmissible infections (STIs) in Indigenous communities. With a focus on adolescents and young adults in urban settings, the Australian component of the study seeks to identify factors that protect against acquisition of BBV/STI and promote access to prevention and treatment, and provide capacity building

opportunities for Indigenous researchers and Aboriginal Community Controlled Health Services. In 2011, surveys data were collated and analysis commenced. Health services undertook data analysis training.

**Status:** Ongoing.

**Personnel:** Anna Olsen, Lisa Maher, John Kaldor

**Collaborators:** Townsville Aboriginal and Islanders Health Service Ltd; The Aboriginal Medical Service Coop Ltd, Redfern; Derbarl Yerrigan Health Service, Perth; Centre for Infectious Disease Prevention and Control, Health Canada; Canadian Aboriginal AIDS Network; University of Ottawa; Ngā Pae o te Māramatanga, University of Auckland; Auckland University of Technology; University of Otago Medical School

**Funding:** Tripartite Cooperation Agreement between Canadian Institutes of Health Research (CIHR); National Health and Medical Research Council of Australia (NHMRC); Health Research Council of New Zealand (HRC)

**Co-location:** *Viral Hepatitis Epidemiology and Prevention Program* and *Public Health Interventions Research Group*

---

### Liver Spots: A study of hepatitis B knowledge, treatment and health care among Indigenous Australians

This project aims to engage Indigenous individuals, families and communities affected by hepatitis B, as well as health care providers and policy makers, in addressing the social and treatment needs of Aboriginal and Torres Strait Islander people living with chronic hepatitis B. Working with both urban and rural/remote communities, the study will investigate facilitators and barriers to biomedical knowledge, cultural healthcare needs, traditional health beliefs and facilitators and barriers of treatment uptake. Information generated from in-depth interviews and survey data will contribute to meeting the chronic health management and treatment needs of participating individuals and communities as well as providing data to inform the development of culturally appropriate resources and services for Indigenous Australians. Pilot work on the project began in late 2010.

**Status:** Ongoing

**Personnel:** Anna Olsen, Lisa Maher

**Funding:** NHMRC Training Fellowship

---

### The International Collaboration of Incident HIV and hepatitis C in Injecting Cohorts (InC3) Collaborative Group

While several prospective studies have been conducted worldwide over the last decade, knowledge of the epidemiology of acute HIV and HCV infection in PWID remains limited. Drawing on a merged international multi-cohort project of pooled data from well characterised cohorts of people who inject drugs (PWID), InC3 offers an unprecedented opportunity to overcome the limitations of current studies and address questions unanswered due to a lack of statistical power, limited observation time, heterogeneous populations or other constraints.

InC3 was established to create a merged international multi-cohort project of pooled data from well characterised cohorts of injecting drug users in order to conduct studies of risk, incidence and the natural history of acute HIV and HCV infection. Specific aims are to: 1) Examine temporal trends in HIV and HCV incidence, and determine the behavioural, social, and biological factors that explain trends over time; 2) Estimate HCV incidence rates by HIV status and sexual behaviour; 3) Estimate the rate and determinants of spontaneous viral clearance of acute HCV infection in IDU; 4) Estimate the rates, outcomes and key predictors of HCV re-infection and re-clearance among HCV resolvers; 5) Examine whether HCV infection disclosure is associated with changes in risk exposures in IDU and; 6) Assess factors associated with initiation, adherence and effectiveness of clinical treatment of acute HCV.

This collaboration has been successful in pooling behavioural, clinical and virological data on 522 participants with well-defined HCV seroconversion events from nine cohorts in Australia, Canada, Europe and the United States. This is the largest consortium of investigators assembled to investigate acute HCV infection. The behavioural, clinical and virological data already collected and the access to stored specimens from this merged study has the potential to provide invaluable insight into the control of HCV infection, including the development of novel HCV therapeutics and vaccine strategies.

**Status:** ongoing

**Personnel:** Gregory Dore, Jason Grebely, Lisa Maher, Tanya Applegate, Gail Matthews, Maryam Alavi, Kimberly Page, Julie Bruneau, Andrea Cox, Judith Hahn,

Margaret Hellard, Arthur Kim, Georg Lauer, Andrew Lloyd, Barbara McGovern, Maria Prins, Stephen Shiboski, Naglaa Shoukry

**Collaborating centres:** University of California San Francisco (lead); Burnet Institute; Inflammation and Infection Research Centre UNSW; Johns Hopkins University; Massachusetts General Hospital; University of Amsterdam and Infectious Disease Cluster, Amsterdam Public Health Service; University of Montreal

**Funding:** National Institutes of Health  
**Co-location:** *Viral Hepatitis Epidemiology and Prevention Program* and *Viral Hepatitis Clinical Research Program*

---

### Young Women's Health Study (YWHS) II: Culture and HIV prevention in Cambodia

The YWHS is a prospective study of young (15 to 29 years) women engaged in sex work in Phnom Penh. Women are followed up at quarterly intervals and asked to complete a structured questionnaire in Khmer and to provide blood for HIV testing, self-collected urine for chlamydia, gonorrhoea and ATS testing, and cervical swabs for human papilloma virus (HPV) testing. HPV vaccination is offered to eligible participants. Aims are to: 1) Estimate prevalence and incidence of HIV and STIs including HPV; 2) Examine the socio-cultural factors and risks associated with ATS use and; 3) Assess rates of completion and adherence to a multi-dose vaccine regimen for the prevention of HPV. As part of the YWHS, trained interviewers also conducted qualitative in-depth interviews to explore social and cultural influences on HIV/STI risk and protective behaviours and ATS use.

**Status:** Data are being analysed and results prepared for publication

**Personnel:** John Kaldor, Lisa Maher, Kimberly Page, Saphonn Vonthanak, Serey Phal, Joel Palefsky, Tooru Nemoto  
**Collaborating centres:** University of California, San Francisco (lead); National Center for HIV/AIDS, Dermatology and STDs (NCHADS); Cambodian Women's Development Association

**Funding:** National Institutes of Health

---

### New hazards for young women sex workers: Effects and crises arising from recent anti-trafficking laws in Cambodia

This qualitative study aims to assess the impact and effects of the implementation

of recent anti-trafficking and anti-prostitution laws on female sex workers (FSW) in Phnom Penh, Cambodia. Specifically, the study aims to 1) Assess the impact of these laws on individual risk and protective behaviours and risk environments (sex work settings) and; 2) Document how women have adapted to the reputed harsh and severe implementation of these laws.

**Status:** Data collection for this study has been completed and analysis is currently underway.

**Personnel:** Lisa Maher

**Collaborators:** University of California, San Francisco (lead); Cambodian Women's Development Association.

**Funding:** University of California Pacific Rim Research Program

---

### **Staying safe: A sociology of how injecting drug users avoid viral infection in the long-term**

This study aims to reconstruct the life trajectories of injecting drug users to identify social practices and conditions linked to long term avoidance of hepatitis C virus infection. Using qualitative life history studies from long-term PWID who have not been exposed to hepatitis C alongside those who have been exposed; this is the first research in the UK on long-term avoidance of viral infections associated with injecting drug use. To date a total of 38 in-depth qualitative interviews have been conducted.

**Status:** Ongoing

**Personnel:** Lisa Maher, Tim Rhodes, Chris Bonell, Vivian Hope, Carla Treloar, Samuel Friedman

**Collaborators:** London School Hygiene Tropical Medicine, University of London (lead); National Development and Research Institutes, New York; National Centre for HIV Social Research.

**Funding:** Economic and Social Research Council

# ■ SURVEILLANCE COMMITTEES 2012

## ANNUAL SURVEILLANCE REPORT ADVISORY COMMITTEE

**David Wilson BSc, BInfTech,  
BAppSc(Hons), GradCert(Biostats),  
PhD (Chair)**

The Kirby Institute

**Benjamin C Cowie MBBS PhD FRACP**

Epidemiologist & Physician, WHO  
Regional Reference Laboratory for  
Hepatitis B, Victorian Infectious Diseases  
Reference Laboratory, Melbourne

**Simon Donohoe**

Manager, AFAO-NAPWHA Education  
Team, Australian Federation of AIDS  
Organisations, Sydney

**Basil Donovan MB BS, MD, Dip Ven  
(London), FACHSHM, FAFPHM, FRCPI**  
The Kirby Institute

**Liza Doyle**

Division Manager, National Policy and  
Education, Australasian Society for HIV  
Medicine, Sydney

**Andrew Grulich MB BS, MSc, PhD,  
FAFPHM**

The Kirby Institute

**Lisa Maher PhD**

The Kirby Institute

**Limin Mao PhD**

Senior Research Fellow, National Centre  
in HIV Social Research, UNSW, Sydney

**Ann McDonald BSc, MPH**

The Kirby Institute

**Tadgh McMahon DrPH**

Manager, Multicultural HIV and Hepatitis  
Service, Sydney

**Andrew Nakhla BComm, LLB**

The Kirby Institute

**Kate Pennington**

Epidemiologist, Health Protection &  
Surveillance Branch, Office of Health  
Protection, Department of Health and  
Ageing, Canberra

**Helen Tyrrell RN, BA(Hons), MBA,  
FACHSE, CHE**

Chief Executive Officer, Hepatitis  
Australia, Canberra

**Russell Waddell MB BS, BSc, FACHSHM**

Director, STD Services, Royal Adelaide  
Hospital

**Jo Watson**

Executive Director, National Association  
of People with HIV Australia, Sydney

**Melanie Middleton BMedSc, MPH  
(Secretary)**

The Kirby Institute

## NATIONAL BLOODBORNE VIRUS AND SEXUALLY TRANSMISSIBLE INFECTIONS SURVEILLANCE SUBCOMMITTEE\*

*Footnote \*Subcommittee of the  
Communicable Diseases Network Australia*

**Christine E Selvey MBBS, MSc (Chair)**

Executive Director, Communicable  
Diseases Unit, Queensland Department  
of Health, Brisbane

**Benjamin C Cowie MBBS PhD FRACP**

Epidemiologist & Physician, WHO  
Regional Reference Laboratory for  
Hepatitis B, Victorian Infectious Diseases  
Reference Laboratory, Melbourne

**John de Wit MSc, PhD**

Professor and Director, National Centre  
in HIV Social Research, UNSW, Sydney

**Carolien Giele RN, RM, BSc(Hons),**

**Grad Dip Clin Epi, MPH**

Epidemiologist, Communicable Disease  
Control Directorate, Department of  
Health, Perth

**Margaret Hellard MB BS, FRACP, PhD,  
FAFPHM**

Head, Centre for Population Health,  
Burnet Institute, Melbourne; Professor,  
Infectious Diseases and Epidemiology;  
NHMRC Senior Research Fellow

**Nasra Higgins BHLthSc(EnvHlth), Grad**

**Dip Epid & Biostat, MEpid**

Epidemiologist, Communicable Disease  
Epidemiology and Surveillance, Health  
Protection Branch, Department of Health

**John Kaldor PhD**

The Kirby Institute

**Monica M Lahra FRCPA PhD**

Associate Professor and Director, WHO  
Collaborating Centre for STD (WPR and  
SEAR). Staff Specialist Microbiology  
Department – SEALS. School of Medical  
Sciences UNSW

**Meeyin Lam BAppSc, MIPH**

Epidemiologist (BBVs and STIs),  
Communicable Diseases Branch, NSW  
Ministry of Health

**Ann McDonald BSc, MPH**

The Kirby Institute

**Kate Pennington (to September)**

Epidemiologist, Health Protection &  
Surveillance Branch, Office of Health  
Protection, Department of Health and  
Ageing, Canberra

**April R Roberts-Witteveen, MAE**

Epidemiologist, Health Protection  
Service, ACT Health

**Jiunn-Yih Su MB, MPH**

Surveillance Project Officer, Sexual  
Health and Blood Borne Viruses Unit,  
Centre for Disease Control, Northern  
Territory Department of Health

**Mark Veitch MBBS, MAppEpi, FAFPHM**

Senior Medical Advisor, Public and  
Environmental Health Services,  
Department of Health and Human  
Services, Tasmania

**Russell Waddell MB BS, BSc, FACHSHM**

Director, STD Services, Royal Adelaide  
Hospital

**James Ward**

Baker IDI Central Australia

**Jo Watson**

Executive Director, National Association  
of People with HIV Australia, Sydney

**David Wilson BSc, BInfTech,**

**BAppSc(Hons), GradCert(Biostats),  
PhD**

The Kirby Institute

**Melanie Middleton BMedSc, MPH**

**(Secretary)**

The Kirby Institute

## **AUSTRALIAN NEEDLE AND SYRINGE PROGRAM SURVEY ADVISORY GROUP 2012**

### **Jude Bevan BAppSc, Grad Dip HSc**

Senior Policy and Planning Officer  
(Hepatitis C), Sexual Health and Blood  
Borne Virus Program, Department of  
Health, Perth

### **Jenny Grant (from August)**

A/Manager, Clean Needle Program, Drug  
and Alcohol Services South Australia,  
Adelaide

### **Roland Jauernig BA(Psych), MAppSc**

Manager, Health Protection Services,  
Department of Human Services,  
Melbourne

### **John Kaldor PhD**

Kirby Institute

### **Robert Kemp (Chair)**

Principal Policy Advisor Hepatitis C and  
Manager, Needle and Syringe Program,  
Queensland Health

### **Shayne Kilford (to Oct)**

Needle and Syringe Program  
Coordinator, Northern Territory AIDS  
and Hepatitis Council, Darwin

### **Stephen Lymb BA, Grad Dip Soc Sc**

Manager, Population Programs, Drug  
and Alcohol Services South Australia,  
Adelaide

### **Lisa Maher PhD**

Kirby Institute

### **Sharyn Marshall (from October)**

Program Manager, Northern Territory  
AIDS and Hepatitis Council, Darwin

### **Rose Mason, Grad Dip Mental Health Nurs.**

Senior Policy Analyst, Harm  
Minimisation Unit, AIDS/Infectious  
Diseases Branch, NSW Department of  
Health, Sydney

### **Michael Oster RN, RPN, Grad Cert PHC (to August)**

Manager, Clean Needle Program, Drug  
and Alcohol Services South Australia,  
Adelaide

### **Greg Perry RN, RPN, Grad Dip Soc Sc**

Nurse Unit Manager, Biala Alcohol  
and Drug Service, Metro North Health  
Service District, Queensland Health

### **Fiona Poeder**

Hepatitis C Education Program Manager,  
Australian Injecting and Illicit Drug Users  
League (AIVL), Canberra

### **John Ryan BA, LLB**

Chief Executive Officer, Association  
for Prevention and Harm Reduction  
Programs Australia (Anex), Melbourne

### **Francine Smith**

State Coordinator, Population Health,  
Department of Health and Human  
Services, Hobart

### **Libby Topp PhD (to March)**

Kirby Institute

### **Tammy Waters Dip AOD**

Needle and Syringe Program  
Coordinator, Directions ACT, Canberra  
**Jenny Iversen BAppSc (Secretary)**  
Kirby Institute

# EXTERNAL BOARDS, COMMITTEES AND ADVISORY GROUPS 2012

- 1st Canadian Symposium on Hepatitis C Virus, Montreal, Canada, Organising Committee (Jason Grebely)
- 8th Australasian Viral Hepatitis Conference Organising Committee (Greg Dore Co-chair, Tanya Applegate)
- 8th Australasian Viral Hepatitis Conference Organising Committee, Epidemiology and Public Health Stream (Lisa Maher)
- 8th Australasian Viral Hepatitis Conference Organising Committee, Community and Social Research Stream (Peter Higgs)
- 9th International Congress on Drug Therapy in HIV Infection Scientific Committee (HIV9) (David Cooper)
- 12th IUSTI World Congress, Melbourne, 2012, Organising Committee (Basil Donovan)
- 13th International Workshop on Adverse Drug Reactions and Lipodystrophy in HIV Organising Committee (David Cooper)
- 14th Bangkok Symposium on HIV Medicine Organising Committee (David Cooper)
- 16th Bangkok Symposium on HIV Medicine Organising Committee (David Cooper, Stephen Kerr)
- 2012 International Microbicides Conference M2012 Organising Committee (John Kaldor [Chair], Andrew Vallely, Lisa Maher)
- 2012 Microbicides Conference Organising Committee (Mary Poynten)
- ACCESS Aboriginal Community Controlled Health Service steering committee (John Kaldor)
- ACCESS family planning network steering committee (Basil Donovan, Rebecca Guy)
- ACCESS general practice network steering committee (Basil Donovan, Rebecca Guy)
- ACCESS sexual health service network steering committee (Hammad Ali, Basil Donovan, Rebecca Guy, John Kaldor)
- Addiction and Moral Agency ARC Discovery Project Advisory Committee (Lisa Maher)
- AIDS and Behaviour* Editorial Board (Garrett Prestage)
- AIDS Council of New South Wales Board (Garrett Prestage, Ben Bavinton)
- AIDS Council of New South Wales Ethics Review Committee (Garrett Prestage chair)
- AIDS Council of New South Wales HIV and Sexually Transmissible Infections Working Group (Garrett Prestage)
- AIDS Council of New South Wales Lesbian Health Board Advisory Committee (Julie Mooney-Somers)
- AIDS Council of New South Wales Research and Policy Advisory Committee (Garrett Prestage)
- Alcohol and Drug Foundation NSW, Kathleen York House (Libby Topp, Director)
- Altair Trial MRS Substudy Protocol Steering Committee (David Cooper, Sean Emery, Steve Kerr, Rebekah Puls)
- Altair Trial Protocol Steering Committee (David Cooper, Sean Emery, Kathy Petoumenos, Rebekah Puls)
- ANEX Australian Drugs Conference Reference Group (Lisa Maher)
- Anex Research Advisory Committee (John Kaldor)
- Anney HIV group for international HIV surveillance (David Wilson, Australian representative)
- Asian Network of People who Use Drugs, Hepatitis C Technical Advisory Group (Lisa Maher)
- Asian Pacific Journal of Tropical Biomedicine* Editorial Board (David Wilson)
- ATAHC II Protocol Steering Committee (Greg Dore, Gail Matthews, Jason Grebely, Kathy Petoumenos)
- Australasian Health and Research Data Managers Association Executive Committee (Pip Marks)
- Australasian Professional Society on Alcohol & other Drugs, 2012 Conference, Scientific Program Committee (Peter Higgs)
- Australasian Society for HIV Medicine, Board members (Mark Boyd, Greg Dore)
- Australasian Society for HIV Medicine, NSW HIV Shared Care Workshop Committee (Mark Boyd)
- Australasian Society for HIV Medicine, Risk Management and Audit Sub-Committee (Mark Boyd)
- Australasian Society for HIV Medicine, Education and Training Committee (Sarah Pett)
- Australasian Society for HIV Medicine, *Hepatitis B for Primary Care Providers Monograph* Editorial Committee (Gail Matthews)
- Australasian Society for HIV Medicine, HIV and the Body Steering Committee (Sarah Pett)
- Australasian Society for HIV Medicine, NSW Hepatitis B Reference Committee (Gail Matthews)
- Australasian Society for HIV Medicine, NSW Hepatitis C Reference Committee (Gail Matthews)
- Australasian Society for HIV Medicine, NSW Hepatitis Reference Committee (Greg Dore)
- Australasian Society for HIV Medicine, reviewer of abstracts (Anthony Kelleher)
- Australian Antiretroviral Guidelines Panel (David Templeton, member)
- Australian Chlamydia Control Effectiveness Pilot (ACCEPT) Project Executive Committee (Basil Donovan, Rebecca Guy, John Kaldor)
- Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance (ACCESS) Coordinating Committee (Basil Donovan, Rebecca Guy, John Kaldor)
- Australian Government Department of Health and Ageing Ministerial Advisory Committee on Blood Borne Viruses and Sexually Transmissible Infections (Andrew Grulich member)
- Australian Government Department of Health and Ageing-funded HIV/AIDS, hepatitis C and sexually transmissible infections, education and health promotion materials, expert working group (John Kaldor)
- Australian HIV Observational Database Steering Committee

(Mark Boyd, Matthew Law, Hamish McManus, Kathy Petoumenos, Stephen Wright)  
 Australian Institute of Policy and Science (David Wilson, associate member)  
 Australian Liver Association Clinical Trial Network Executive Committee (Greg Dore)  
 Australian and New Zealand Industrial and Applied Mathematics (ANZIAM) (John Murray, President)  
 Australian New Zealand Breast Cancer Trials Group  
 Independent Data Safety and Monitoring Committee (Matthew Law)  
 Australian NSP Survey National Advisory Group (Jenny Iversen, Lisa Maher, Libby Topp)  
 Australian Radiation Protection and Nuclear Safety Agency  
 Radiation Health and Safety Advisory Council (John Kaldor)  
 Australian Red Cross Blood Service (David Wilson, monitoring advisor)  
 Australian Society for Infectious Disease, Prosthetic Joint Infection Trial Steering Committee (Mark Boyd)  
 Cancer Working Group, international epidemiologic databases to evaluate AIDS (Andrew Grulich)  
 CAS HIV/STI Health Promotion Subcommittee chlamydia working group (Hammad Ali, Rebecca Guy)  
 Centre for Research Excellence in Injecting Drug Use, Education Subcommittee (Jason Grebely)  
 CHEST Management Committee (Bette Liu)  
 Cochrane Collaborative Review Group on HIV infection and AIDS, Biomedical Interventions Reviews Editor (John Kaldor)  
 Communicable Disease Network of Australia Committee, Surveillance and Monitoring Plan for national strategies HIV STI BBV Sub-Committee (David Wilson)  
*Communicable Diseases Intelligence* Editorial Board (John Kaldor)  
 Communicable Diseases Network Australia (John Kaldor)  
 Communicable Diseases Network Australia, Human Papillomavirus (HPV) Surveillance Working Party (John Kaldor)  
 Communicable Diseases Network Australia, New Developments in HIV Surveillance Committee (John Kaldor, Chair)  
 Communicable Diseases Network Australia, Subcommittee on Surveillance of Bloodborne Viral and Sexually Transmitted Infections (Basil Donovan, Rebecca Guy, John Kaldor, Tarana Lucky, Keira Robinson, Ann McDonald, Melanie Middleton, David Wilson)  
 Communicable Diseases Network of Australia (CDNA), National Strategies HIV STI BBV Sub-Committee, Surveillance and Monitoring Plan (David Wilson)  
 Comprehensive International Program for Research on AIDS (CIPRA) HIV Research Program in Thailand and Cambodia International Steering Committee (David Cooper)  
 Council of the PNG Institute of Medical Research (Andrew Vallely, Member)  
*Current HIV/AIDS Reports* Editorial Board (David Cooper, Honorary Member)  
*Current Opinion in HIV and AIDS* (David Cooper, co-editor)  
*Current Opinion in HIV and AIDS* Editorial Board (John Kaldor)  
 Developing Papua New Guinea's National HIV Strategy 2011-2015 (David Wilson, expert reviewer)  
*Drug and Alcohol Review* Editorial Board (Peter Higgs, Lisa Maher)  
*eJournal of the International AIDS Society* Editorial Board (John Kaldor)  
 Encore Program Committee (Sean Emery, Rebekah Puls)  
 Encore1 Central Nervous System Exposure Protocol Steering Committee (Janaki Amin, Carlo Dazo, Rebekah Puls)  
 Encore1 Neurocognitive Substudy Protocol Steering Committee (Rebekah Puls, Anna Donaldson, Steve Kerr, Amanda Clarke)  
 Encore1 Pharmacokinetic Protocol Steering Committee (Dianne Carey, Rebekah Puls)  
 Encore1 Protocol Steering Committee (Janaki Amin, David Cooper, Sean Emery, Rebekah Puls)  
 Enhancing Hepatitis C Treatment Uptake and Outcomes in Opiate Dependency Pharmacotherapy Settings Steering Committee (*ex officio*) (John Kaldor)  
 Estimation of HIV Prevalence for European Countries Working Group (David Wilson)  
 European Developing Country Clinical Trials Partnership (EDCTP) microbicide trial feasibility study, East Africa Steering Committee (Andrew Vallely)  
 Faculty of Medicine, Expert Review Panel (Sean Emery)  
 Faculty of Medicine, Research Management Committee (Anthony Kelleher)  
 Faculty of Medicine, Women's Employment Committee (Rebekah Puls)  
 Family Planning NSW Scientific Advisory Group (Basil Donovan, John Kaldor)  
 FOXFIRE Data Safety and Monitoring Committee (Matthew Law)  
 Gastroenterology Metropolitan Committee on Hepatitis C (Greg Dore co-chair)  
 Genital Warts Surveillance Network (Hammad Ali, Basil Donovan, Rebecca Guy, David Regan)  
*Harm Reduction Journal* Editorial Board (Lisa Maher)  
 Heart Foundation HIV & CVD Consumer Resource Working Group (Kathy Petoumenos)  
 Hepatitis Victoria, Board of Directors (Peter Higgs, president)  
 Hepatitis NSW Medical Research Advisory Panel (Greg Dore)  
 HIV Consortium for Partnership in Asia and the Pacific Management Committee (John Kaldor, Louise Causer)  
 HIV DART 2008 Conference Organising Committee (David Cooper co-chair)  
 HIV Netherlands, Australia, Thailand Research Collaboration (HIV-NAT) International Advisory Board (David Cooper, Co-Director, Chris Duncombe)  
*HIV Therapy* Editorial Board (David Cooper, John Kaldor)  
 HIV+ Health Promotion Interagency (Garrett Prestage, Jack Bradley)  
 HIVNAT International Advisory Board (Sean Emery)  
 HPV Evaluation Linkage Partnership Australia (HELPA) Management Committee (Matthew Law, David Regan)  
 IeDEA Adherence sub-Working Group (Stephen Kerr)  
 IeDEA Cancer Working Group (Matthew Law, Stephen Kerr)  
 IeDEA Data Harmonization Working Group (Azar Kariminia)  
 IeDEA Executive Committee (David Cooper, Matthew Law)  
 Immunovirology Research Network Steering Committee (Anthony Kelleher)  
 Implementing Expanded Naloxone Availability in the ACT (IENAACT) Committee (Anna Olsen)  
*Infectious Disease Reports* Editorial Board (David Wilson)  
 INSIGHT network, Executive Committee (David Cooper, Sean Emery)  
 INSIGHT network, Infrastructure Committee (Sarah Pett, Cate Carey)  
 INSIGHT network, Monitoring Group Committee (David Courtney-Rodgers, Nisha Seneviratne)  
 INSIGHT network, Quality Oversight and Performance Evaluation Committee (David Courtney-Rodgers)  
 INSIGHT network, Training Committee (Cate Carey)  
 Intensive Insulin Therapy Trialists' Collaboration Steering Committee (Bette Liu)  
 International AIDS Society Meeting, Epidemiology and Prevention Stream, Vienna, Austria, Rapporteur (David Wilson)  
 International Centre for Science in Drug Policy, Technical Advisor (Lisa Maher)  
 International Conference on the Reduction of Drug-related Harm Scientific- Program Committee (Lisa Maher)



International HIV/AIDS Alliance Ukraine, Scientific Advisory Board (Lisa Maher)

*International Journal of Drug Policy* Editorial Board (Jo Kimber, Lisa Maher)

*International Journal of STD & AIDS* Editorial Board (Basil Donovan)

International Society for STD Research (Basil Donovan, president elect)

International Society for STD Research organising committee (Basil Donovan, David Cooper, Andrew Grulich, Rebecca Guy, John Kaldor)

International Symposium on Hepatitis Care in Substance Users, Brussels, Belgium, Organising committee (Jason Grebely)

International Union against Sexually Transmitted Infections, Executive Committee (Basil Donovan, Senior Counsellor)

*Journal of Acquired Immune Deficiency Syndromes* Editorial Board (David Cooper)

*Journal of AIDS and Clinical Research* Editorial Board (David Wilson)

*Journal of Hepatology* Editorial Board (Greg Dore)

*Journal of HIV Therapy* Current Trends Advisory Board (David Cooper)

Lao People's Democratic Republic National Strategy and Action Plan on HIV/AIDS/STI 2011-2015 (David Wilson expert reviewer)

Lionel Murphy Foundation (Board of Trustees) (Lisa Maher)

Lotus House Refuge Management Committee (Lisa Maher)

*Medicine Today* Board of Editorial Consultants (Basil Donovan)

MGM Interagency (Iryna Zablotska)

*MIMS Annual* Honorary Editorial Board (Basil Donovan)

Multicultural HIV and Hepatitis Service Advisory Group (Lisa Maher, Chair)

NAPWA Treatments Policy Advisory Group (Fraser Drummond, Sarah Pett)

National Association of People Living with HIV/AIDS, HIV Medication Working Group (Dianne Carey)

National Breast Cancer Foundation Register4 Epidemiological Questionnaire Design Advisory Group (Bette Liu)

National Centre for HIV/AIDS, Dermatology and STD (NCHADS) Steering Committee for Cambodian Treatment Access Program (CTAP) and AusAID funded HIV projects (John Kaldor)

National Centre for Immunisation Research and Surveillance of Vaccine Preventable Disease Scientific Advisory Committee (John Kaldor)

National Centre in HIV Social Research (NCHSR) Scientific Advisory Committee (Lisa Maher)

National Gay Men's Syphilis Action Plan NSW Implementation Committee (Rebecca Guy)

National Gay Men's Syphilis Action Plan Steering Committee and Monitoring and Evaluation Subcommittee (David Wilson, Rebecca Guy)

National Gay Men's Syphilis Action Plan Technical Working Group (Basil Donovan, Andrew Grulich, Rebecca Guy, Garrett Prestage, David Wilson)

National Health and Medical Research Council, Council (Greg Dore)

National Health and Medical Research Council Grant Review Panel (Panel 5E) (Sean Emery)

National Health and Medical Research Council Partnership Projects Grant Review Panel (Basil Donovan)

National Health and Medical Research Council Centres of Research Excellence Grant Review Panel (John Kaldor)

National Health and Medical Research Council Project Grant External Reviewer (Anthony Kelleher, Kersten Koelsch)

National Health and Medical Research Council Project Grant Review Panel Virology and Microbiology (Stuart Turville)

National Health and Medical Research Council, Project Grant Review Panel, Clinical Trials (Greg Dore)

National Health and Medical Research Council Project Grant Review Panel, Indigenous Health (John Kaldor)

National Health and Medical Research Council Public Health Discipline panel (Andrew Grulich)

National Health and Medical Research Council Centres of Research Excellence (Immunisation in Under Studied and Special Risk Populations), Scientific Advisory Board (Lisa Maher)

National Health and Medical Research Council Research Translation Faculty (Lisa Maher)

National HIV Post Exposure Prophylaxis Guidelines Reference Group (Andrew Grulich)

National Prison Entrants Bloodborne Virus Survey Steering committee (Tony Butler, chair)

National Prisoner Health Indicator Project, Technical Expert Group (Tony Butler, chair)

National Prisoner Health Indicator Group (Tony Butler)

National Strategies STI HIV BBV project working groups (Rebecca Guy, John Kaldor, Garret Prestage)

National Surveillance Committee (Ann McDonald)

Netherlands AIDS Foundation Grant Scheme (David Wilson, reviewer)

Northern Territory Sexual Health Advisory Group (John Kaldor)

NPA-IH Aboriginal Hepatitis C Advisory Committee (Brigitte Gerstl)

NSW Chief Health Officer Report Special Topic: STI (Basil Donovan, David Wilson, advisory group members)

NSW Department of Corrective Services Ethics Committee (John Kaldor)

NSW Greater Metropolitan Clinical Taskforce Hepatitis C Subcommittee (Greg Dore, co-chair)

NSW Health CAS Health Promotion Sub-Committee Chlamydia Working Group (Rebecca Guy)

NSW Health Expert Advisory Panel - Wide bore syringes (Lisa Maher)

NSW HIV Point of Care Testing Working Group (Andrew Grulich, Damian Conway, Rebecca Guy, Garret Prestage)

NSW Ministerial Advisory Committee on Hepatitis (MACH) (Greg Dore, Lisa Maher)

NSW Ministerial Advisory Committee on HIV/AIDS and Sexually Transmissible Infections, Health Promotion Subcommittee (Andrew Grulich chair, Garrett Prestage member)

NSW Ministerial Advisory Committee on HIV/AIDS and Sexually Transmissible Infections Health Promotion Sub-Committee - Chlamydia Working Group (Hammad Ali, Rebecca Guy)

NSW Users and AIDS Association Expert Advisory Committee (Lisa Maher)

NSW Users and AIDS Association Peer Distribution Advisory Committee (Lisa Maher)

NSW Users and AIDS Association Research Ethics Advisory Committee (Lisa Maher)

Office of Management and Budget (OMB) Peer Reviewer, Public Health Services (PHS) *Guidelines for Pre-Exposure Prophylaxis (PrEP) for HIV Prevention with Men Who Have Sex with Men*, Centres for Disease Control (John Kaldor)

OpiCare Leadership Team (Greg Dore, Jason Grebely)

Papua New Guinea Annual Medical Symposium 2011 Organising Committee (Andrew Vallely)

Papua New Guinea HIV Modelling Reference Group (John Murray)

Papua New Guinea Policy Forum on Male Circumcision for HIV Prevention Organising Committee (Andrew Vallely, John Kaldor)

PEARL study (HN152) Data and Safety Monitoring Board Committee (Matthew Law)

Practical Advances in Treating HIV (PATH II) Steering Committee (Sean Emery, Chair)

Project Coordinating Committee for the NSW Aboriginal Sexual and Reproductive Health Evaluation Program (Brigitte Gerstl)

ProPremis Trial Data Safety Monitoring Committee (John Kaldor)

Public Health Association of Australia (Tony Butler)

Queensland Ministerial Advisory Committee on HIV/AIDS, Hepatitis C and Sexual Health Member (Andrew Vallely)

Repatriation Medical Authority (John Kaldor)

Review of the Australian National HIV Testing Policy, Member Expert Reference Committee, (Andrew Grulich)

Sax Institute (David Wilson)

*Sexual Health* (David Cooper, Editor)

*Sexual Health* Editorial Board (Basil Donovan, Andrew Grulich, John Kaldor, Garrett Prestage)

Sexual Health of Adolescents Living with HIV (Unicef Thailand and the We Understand Group) (Stephen Kerr, Advisory Board member)

Sexual Reproductive Health Program Resource Advisory group (Brigitte Gerstl)

Sexually Transmitted Infections Programs Unit (STIPU) Advisor Group, NSW (Rebecca Guy)

*Sexually Transmitted Infections*, Editorial Board (David Cooper)

*Sexually Transmitted Infections*, Elsevier, New Delhi (Basil Donovan, Section Editor)

Sidney Myer Health PhD Scholarship Selection Committee (Peter Higgs)

SIRFLOX Independent Data and Safety Monitoring Board Committee (Matthew Law)

SPARTAC Trial Steering Committee (David Cooper, Anthony Kelleher)

St Vincent's Centre for Applied Medical Research/UNSW Research degree review committee (Anthony Kelleher)

St Vincent's Hospital Campus Institutional Biosafety Committee (Anthony Kelleher)

St Vincent's Hospital Human Research Ethics Committee (Kathy Petoumenos, Handan Wand, Dianne Carey)

St Vincent's Research & Biotechnology Precinct Hub Governance Council (David Cooper)

Steering Committee for NHMRC grant under the International Collaborative Indigenous Health Research Partnership (John Kaldor)

STIGMA - NSW Implementation committee for the National Syphilis Action Plan (Rebecca Guy)

STIGMA (Iryna Zablotska)

SydPath Research Committee (Anthony Kelleher)

The Cancer Council NSW Cancer Research Committee (Andrew Grulich)

The Data Collection on Adverse Events of Anti-HIV Drug Study International Steering Committee (Matthew Law)

The HIV/AIDS Legal Centre (HALC) Management Board (Iryna Zablotska)

Overdose Awareness Day Committee (Peter Higgs)

Therapeutic Goods Administration (TGA) expert advisory panel for influenza vaccine testing (Anthony Kelleher)

TREAT Asia HIV Observational Database Steering Committee (Matthew Law)

TREAT Asia Paediatric HIV Observational Database Steering Committee (Matthew Law, Azar Kariminia)

TREAT Asia Steering Committee (David Cooper)

UNAIDS Estimation of Australia's HIV/AIDS indicators (David Wilson)

United Kingdom Medical Research Council/National Health Service Clinical Research Panel (Sean Emery)

UNSW Academic Board Committee Member (John Kaldor)

UNSW Academic Board Higher Degree Research Committee (John Kaldor)

UNSW Faculty of Medicine Higher Degree Research Committee (Libby Topp)

UNSW Faculty of Medicine Postdoctoral Advisory Committee (Jason Grebely, Mary Poynten)

UNSW Faculty of Medicine Research Grant/Early Career Grant Review (Anthony Kelleher)

UNSW Hepatitis C Vaccine Initiative Steering Committee (John Kaldor)

UNSW Human Research Ethics Advisory Panel: Medical/Community (Greg Dore, Mark Boyd)

UNSW Institutional Biosafety Committee (Stuart Turville)

UNSW School of Public Health and Community Medicine Research Committee (Tony Butler)

User's News and New South Wales Users and AIDS Association Advisory Group (Jason Grebely)

VAC/GMHC Sexually Adventurous Men's Project Committee (Garrett Prestage)

World Health Organisation Guidelines Development Working Group: Guidance for Viral Hepatitis B and C Prevention in People Who Inject Drugs; Surveillance, Screening and Antiretroviral Management in People with HIV and Viral Hepatitis B and C Co-infections (Lisa Maher)

World Health Organisation Strategic and Technical Advisory Committee for HIV/AIDS (David Cooper)

World Health Organisation Working Group on Incidence Assays for HIV Infection (John Kaldor co-Chair)

World Health Organisation/UNAIDS HIV Vaccine Advisory Committee (David Cooper, Chair)

World Hepatitis Day Clinical and Public Health Advisory Panel (Greg Dore)

## DIRECTOR'S OFFICE

### Director and Scientia Professor of Medicine

David Cooper AO FAA, BSc(Med), MB BS, MD, DSc, FAA, FRACP, FRCPA, FRCP

### Executive Assistant

Janette Button

### Research Assistant

Damien Cordery BSc(Hons), MPH, PhD

### Vaccines program grant co-ordinator

John Wilkinson BSc(Hons), PhD

### Manager, Research Communication

Louisa Wright M Journalism, MPH

## ABORIGINAL AND TORRES STRAIT ISLANDER PROGRAM

### Program Heads (acting)

John Kaldor PhD

Rebecca Guy BAppSc, MAppEpid, PhD

### Research Manager

Simon Graham BIS, MAppEpid

### Clinical Project Leader

Mary Ellen Harrod BA, Dip Arts, M

Prelim, PhD

### Project Coordinator

Linda Garton RN, Grad Cert Adv Prac,

Sex Hlth

### Senior Research Officers

Amalie Dyda BHSc, MAppEpid

Brigitte Gerstl BSoc, MPH

### Project Officers

Belinda Ford BSc, MPH

Rebecca Lorch DipNurs BSc(Hons)

### Research Officer

Imogen Green BSc MSc

### Administrative assistant

Andrew Nakhla BComm, LLB

## BIOSTATISTICS AND DATABASES PROGRAM

### Head and Professor

Matthew Law MA, MSc, PhD

### Associate Professor

John Murray BSc(Hons), MSc, PhD (part time)

### Senior Lecturer

Janaki Amin BSc(Hons), MPH(Hons), PhD

Stephen Kerr BPharm(Hons), MIPH, PhD

(based at HIV-NAT, Thailand)

Kathy Petoumenos BSc, MA,

MPH(Hons), PhD

David Regan BA, BSc(Hons), PhD

Handan Wand MA, MSc, PhD

### Lecturer

Azar Kariminia BSc, MSc, PhD

### Associate Lecturer

Ben Hui BE(computer engineering),

MBiomedE

### Research Associates

Igor Korostil MSc

### Statisticians

Amit Achhra MBBS MPH

David Boettiger MPharm MSc Epi

Awachana Jiamsakul BSc, MS

Hamish McManus BEcon, BAActS, MBIOS

Cecilia Moore MSc MPH

Stephen Wright BMath, MAppStat

### Computer Systems Officers

Noorul Absar BTech, Grad Dip(Inf Sc),

MComp(SW Eng)

Rossitza Chevkenova BSc

### Program co-ordinator

Courtney Bendall DipBus

### Administrative assistant

Supreet Mehik B Homoeop Med Surg

## HIV EPIDEMIOLOGY AND PREVENTION PROGRAM

### Head, Professor and NHMRC Principal Research Fellow

Andrew Grulich MBBS, MSc, PhD,

FAFPHM

### Associate Professor

Garrett Prestage BA, PhD, JP

### Senior Lecturers

(Fengyi) Jeff Jin MB, MPH, PhD

(Isobel) Mary Poynten MBBS, DCH, MPH

(Hon), PhD

David J Templeton MBChB, DipVen,

MForeshMed, PhD, MACLM, MFFLM,

FACHSHM

Iryna Zablotska-Manos PhD, MD, MPH

### Lecturer

Jeanne Ellard BA (Hons), MPhil, PhD

### Associate Lecturers

Ben Bavinton BA (Hon), MPH

Ian Down MPH

Michelle McKechnie BMedSci (Hon), PhD

### Research Assistants

Brian Acraman

Lara Cassar CertIVBusAdmin

Patrick McGrath BA, Dip Ed, Grad Dip

Matthew O'Dwyer BLibStud, MPH (Hons)

### Project Officer

Jack Bradley

### Program Coordinator

Anna Checkley BA (Hons)

### Conjoint Associate Professor

Richard Hillman MD FRCP FACHSHM

University of Sydney

### Adjunct Lecturer

Kathy Triffitt BA, Grad Dip, Ph D Positive

Life NSW

## IMMUNOVIROLOGY AND PATHOGENESIS PROGRAM

### Professor and Head

Anthony Kelleher BSc(Hons), MB

BS(Hons), PhD, FRACP, FRCPA

### Senior Lecturer and NHMRC CDA

### Fellow

Stuart Turville BSc (Hons) PhD

### Lecturer

Kersten Koelsch MBBS, MD

### Clinical Project Co-ordinator

Patricia Grey BA, Post Grad Dip App Sci,

CNS, Dip (Counselling)

### Research Fellows

Anupriya Aggarwal PhD

Chantelle Hood PhD

Mee Ling Munier PhD

David van Bockel PhD

### Research Assistants

Mehreen Arshi BSc MPhil

Michelle Bailey BSc(Hons)

Susanna Ip BSc

Glen Lockwood BSc

### Data Administrator

Ansari Shaik BA, MBA

### Administrative assistant

Tracey Barrett

## JUSTICE HEALTH PROGRAM

### Head and Professor

Tony Butler MSc (Quant methods) MSc (IT) PhD DipAppEpi

### Research assistant

Michael Doyle Grad Dip (Indig H Promotion)

### Research Fellows

Claudette Satchell BSc (Hons) PhD

Lorraine Yap PhD

### Senior Research Officer

Joanne Reekie BSc (Hons), MPhil, PhD

### Research Officers

Shamin Kinathil MSc, BE (Hons), BSc

Paul Simpson BSc (Psych)

## PUBLIC HEALTH INTERVENTIONS RESEARCH GROUP

### Head and Professor of Epidemiology

John Kaldor PhD

### Associate Professor

Andrew Vallely MBBS, MRCP, MSc, DTMH, PhD

### Senior Lecturer

Bette Liu MBBS(Hons) MPH(Hons) DPhil

### Lecturers

Louise Causer MB BS, MSc, DTM&H

Joanne Jackson (Micallef) BMedSc

(Hons), PhD

Bradley Mathers MSD, MBChB, BHB

### Clinical Trials Co-ordinator

Lucia Romani BSocSci MA

### Senior Research Officer

Joanne Reekie BSc (Hons), MPhil, PhD

### Program Manager

Skye McGregor BA, BSc, MA

## SURVEILLANCE AND EVALUATION PROGRAM FOR PUBLIC HEALTH

### Head and Associate Professor

David Wilson BSc, BInfTech, BAppSc(Hons), GradCert(Biostats), PhD

### Senior Health Economist

Klara Henderson BA, MCOM, PhD

### Senior lecturer

Lei Zhang BSc(Adv Hons), MSc, PhD, MPH

### Lecturer

Richard Gray BSc(Hons), PhD

### Post Doctoral Research Fellows/

### Associate Lecturers

Mehala Balamurali BSc(Hons), PhD

Alexander Hoare BSc(Hons), PhD

Josephine Reyes BS, MS, PhD

### Research Associate

Cliff Kerr BSc(Hons), LMusA, DipArts, PhD

### HIV Surveillance Coordinator

Ann McDonald BSc, MPH

### Senior Surveillance Officer

Carleigh Cowling BNurs, PGDipMid

### Surveillance Officers

Melanie Middleton BMedSci, MPH

Tarana Lucky MBBS, MPH

### Research Assistants

Andrew Craig BSc

Corrine Iu BScEd, MPH

Shamin Kinathil BE(Hons), BSc

Elizabeth Mlambo BSc, MPH

Gordana Popovic BEd, BSc(Hons)

Andrew Shattock BSc, MSc

### Program Coordinator

Megan Tapia

## SEXUAL HEALTH PROGRAM

### Head and Professor of Sexual Health

Basil Donovan MB BS, DipVen (Lond),

MD, FAFPHM, FRCPI, FACHSHM

### Senior Lecturer and NHMRC Post-doctoral Fellow

Rebecca Guy BAppSc, MAppEpid, PhD

### Lecturers

Hammad Ali BSc, MBBS, MPH

Damian Conway, MB BCH MMed(STD/

HIV) FACHSHM MRCPG DRCOG DFF

Fraser Drummond MB ChB, MRCA, DA

(UK) (to June)

### Senior Research Officer

Kirsty Smith RN, Grad Dip Education, MPH

### Project Co-ordinators

Lisa Edwards BNurs MPH

Rebecca Lorch DipAdultNurs BSc(Hons)

### Research Assistants

Larissa Lewis BA

Muhammad Shahid Jamil MBBS MPH

MHM

Denton Challander BA, BMT

### Visiting research fellow

Hsin-Chun (Grace) Lee MD

### Program Coordinator

Lucy Watchirs Smith BA, MPH

## THERAPEUTIC AND VACCINE RESEARCH PROGRAM

### Head and Professor

Sean Emery BSc(Hons), PhD

### Senior Lecturer

Mark Boyd BA, BM, BS, DCTM&H,

MHID, MD, FRACP

Sarah Pett BSc(Hons), MB BS(Hons),

DTM&H, MRCP (UK), FRACP,PHD

Rebekah Puls BSc(Hons), PhD

### Lecturer

Dianne Carey BPharm, MPH, PHD

### Senior Clinical Project Co-ordinators

Cate Carey RN, BA, MAppSc(Research)

Allison Humphries BSc, MSc (Med), Grad

Dip PH

David Courtney-Rodgers

### Clinical Project Co-ordinators

Maria Arriaga BSc, MScMed (STD/HIV)

Megan Clewett BAppSc HIM

Carlo Dazo BMedSc (Hons)

Anna Donaldson MSC

Hila Haskelberg BSc

Sally Hough BAppSci, Postgrad Cert PM

Simone Jacoby BSc, Dip Nutrition, Adv

Dip Bot Med

Joe Levitt AAS

Nisha Berthon-Jones BMedSc, BBus

Megan Evans BAppSc HIM

Natalie Espinosa BS (Biomed),

MA.AppSc (Ex&Sc)

Jessica Taylor (BNurs)

David Silk BSc (Hons)

Elise Tu BSc (Hons), PhD

### Program Managers

Helen Kriketos BA

Cathy O'Connell

### Data Managers

Kymme Courtney-Vega Dip Sp Th

Andrea Redgrave BEng, MSEC

Jose Aurelio Vieira Vulcao BA

### Administrative Assistants

Pamela Findlay

Tanya Johannesen BDes

Rosemary Robson

## VIRAL HEPATITIS EPIDEMIOLOGY AND PREVENTION PROGRAM

### Professor and Head

Lisa Maher PhD

### Senior Lecturer

Libby Topp BSc(Psychol)(Hons), PhD

### Associate Lecturer

Sarah Wright BSc, PGDip Sci, PhD

(Physiology)

### Lecturer

Mihaela Ivan MD MSc FAFPHM

### Post Doctoral Research Fellows

Peter Higgs PhD, MA, BSW

Anna Olsen PhD

### Study Co-ordinators

Jenny Iversen BAppSc

Bethany White BA (Psych), MPH

### Research Assistants

Anna Bates BA, MPH

Sammy Chow BSc (Hons)

Jarliene Enriquez

### Program Coordinator

Rachel McCleave BA(Hons), BEd(Prim)

## VIRAL HEPATITIS CLINICAL RESEARCH PROGRAM

### Head and Associate Professor

Greg Dore MB BS, BSc, PhD, FRACP, MPH

### Senior Lecturers

Gail Matthews MBChB, MRCP(UK),

FRACP PhD

Tanya Applegate BSc (Hons), PhD

Jason Grebely BSc, PhD

### Associate lecturer

Daniel Bradshaw BMBCh MA MRCP (UK)

### Clinical Trials Manager

Pip Marks BSc, MPH (Hons)

### **Clinical Project Co-ordinators**

Marianne Byrne B.Sci (Hons); Grad Cert ClinTrialsMan

Amanda Erratt ADip (Med Record Admin)

Michelle Micallef Phd, BBMedSci (Hons)

John J Morrison, BSc (Hons), PhD

Sophie Quiene MSc

Barbara Yeung RN, BHSc (Nursing), MPH

### **Systems manager**

Ineke Shaw BSc, Grad Cert BioStats

### **Senior Research Officer**

Francois Lamoury EICnam (Biology)

### **Research Assistants**

Sofia Bartlett BSc (Hons)

### **Data Managers**

Sharmila Siriragavan BMedSci

Mahshid Tammadoni BE, MAppSc

### **Labkey Database Developer**

Trent Schafer BA IT

### **Laboratory Coordinator**

Austin Butcher

### **Program Coordinator**

Dee Bryant

### **Conjoint senior lecturer**

Dr Alex Thompson MBBS, PhD, FRACP, St Vincent's Hospital Melbourne

## **OPERATIONS AND ADMINISTRATION**

### **Operations Manager**

Daren Draganic BSc(Hons)

### **Finance Manager**

Eilis Duggan BBS(Hons), ACA

### **Accountants**

Gina Lam BA(Hons), EMBA

Selina Cheng BA, MComm, CPA

Teresa Wong BAcc, CPA

### **Finance officer**

Daisy Kibir

### **Librarian**

Coralie Kronenberg BA, Dip IM Lib, AALIA

### **IT Specialist**

Sergio Sandler MSc, EE, Dip Ed

### **Computer Systems Officers**

Lisa Howard Dip IT

Charles Tran BCompSc

### **Manager, Human Relations**

Brigitte Sharp BA(Hons), MAppSc

### **Manager, Administration**

Yvette Toole

### **Receptionist**

Rata Joseph

## **RESEARCHERS AFFILIATED TO NCHECR**

### **Visiting Professor**

Jennifer Hoy MB BS, Grad Dip Epi Bio, FRACP

### **Senior Visiting Fellow**

Philip Cunningham BAppSc(Med)

Chief of Operations, St Vincent's Centre for Applied Medical Research

Robert Myers

### **Visiting Fellows**

Bruce Brew MB BS(Hons), MD, FRACP

Professor of Medicine

St Vincent's Hospital, Sydney

Nick Crofts MB BS, MPH, FAFPHM

Professor and Director

Turning Point Alcohol and Drug Centre, Melbourne

Hsin-Chun Lee MD

Assistant Professor and Infectious

Disease Physician,

College of Medicine, National Cheng

Kung University, Taiwan

Cathy Pell MB BS, MM FChSM

Sexual Health Physician

Taylor Square Private Clinic, Sydney

Don Smith MB ChB, MD

Associate Professor and Head of Research Development

Albion Street Centre, Sydney

Mark Sullivan BSc

Chief Operating Officer

VivaGel™ Microbicide Development

Consortium

Medicines Development Limited, Melbourne

Alex Wodak MB BS, MRACP, FRACP,

MRCP, FAFPHM, FChAM

Director, Alcohol and Drug Service

St Vincent's Hospital, Sydney

### **Conjoint Associate Professors**

Jintanat Ananworanich MD PhD

Deputy Director, HIV Netherlands

Australia Thailand Research

Collaboration (HIV-NAT)

Richard Hillman MD FRCP FChSHM

Associate Professor and Director

HIV & STI Postgraduate Program,

University of Sydney

Catherine O'Connor MB.BS(Hons),

DrPH, MM, FChSHM, FRACGP,

DRACOG

Director, Sexual & Womens Health,

Sydney Local Health District

### **Honorary Senior Lecturer**

Dr. Alex Thompson, MBBS, PhD, FRACP

Head of Hepatology Research

St. Vincent's Hospital, Melbourne

### **Adjunct Lecturers**

Phillip Read BSc, MBBS, MRCP, DipGUM,

DFFP, DipHIV, MPH, FChSHM

Post-graduate Fellow, Sydney Sexual

Health Centre, Sydney Hospital

Kathy Triffitt BA, Grad Dip, Ph D

Manager, Health Promotion

Positive Life NSW

# ■ POSTGRADUATE STUDENTS AND STUDENT SUPERVISION

## PHD CANDIDATES AT THE KIRBY INSTITUTE

### **Amit C Achhra**

Bio-markers and other predictors of AIDS and non-AIDS diseases in HIV observational (cohort) studies  
Supervisors David Cooper; Janaki Amin; Matthew Law

### **Maryam Alavi**

Barriers to the assessment and treatment of hepatitis C virus infection in injecting drug users  
Supervisors: Greg Dore, Jason Grebely

### **Hammad Ali**

Epidemiology of Chlamydia and development of national systems to measure incidence in Australia.  
Supervisors: Rebecca Guy, Basil Donovan, David Wilson

### **Jonathan Anderson**

The role of economic evaluation in decision-making about HIV  
Supervisors: David Cooper; Sean Emery; Kathy Petoumenos

### **Maria Arriaga**

Aspects of Human Immunodeficiency Virus (HIV) management  
Supervisors: Sarah Pett, Mark Boyd

### **Ben Bavinton**

HIV viral load and transmission in serodiscordant male homosexual couples.  
Supervisors: Andrew Grulich, Garrett Prestage

### **Louise Causer**

Rapid points of care (RPOC) tests for diagnosis of sexually transmitted infections (STIs): evaluation of accuracy, acceptability and impact in Australia and Papua New Guinea (PNG).  
Supervisors: John Kaldor, Rebecca Guy

### **Eric Pui Fung Chow**

Understanding the past, forecasting the future – investigating the epidemiology of HIV/AIDS in China  
Supervisors: Lei Zhang, David Wilson

### **Paul Clark**

Barriers to Hepatitis C treatment and cure.  
Supervisors: Greg Dore; Alex Thompson

(St Vincent's Hospital, Melbourne); Gail Matthews

### **Damian Conway**

Novel approaches to HIV testing for men who have sex with men.  
Supervisors: Rebecca Guy, Martin Holt (NCHSR), Andrew Grulich

### **Laura Cook**

Characterisation of T regulatory cells  
Supervisors: Tony Kelleher, Nabila Seddiki

### **Andrew Peter Craig**

Biomathematical and biostatistical modelling of Chlamydia infection, immunity, pathology and vaccine strategies

Supervisor: David Wilson

### **Ian Down**

Meanings of HIV and 'safe-sex' among a sample of recently diagnosed gay men in Australia

Supervisors: Garrett Prestage, Jeanne Ellard

### **Fraser Drummond**

Chemoprophylaxis for syphilis in MSM - a trial of systemic chemoprophylaxis for syphilis in HIV positive men who have sex with men

Supervisors: Basil Donovan; John Kaldor; Rebecca Guy; Jeff Klausner

### **Brigitte Gerstl**

Biostatistics, epidemiology, public health  
Supervisor: Handan Wand

### **Simon Graham**

Quality improvement in Aboriginal Community Controlled Health Services in New South Wales  
Supervisors: Rebecca Guy; Handan Wand

### **Behzad Hajarizadeh**

Diagnosis and natural history of acute hepatitis C virus infection  
Supervisors: Greg Dore; Jason Grebely; Tanya Applegate

### **Hila Haskelberg**

Antiretroviral toxicity in HIV-infected patients  
Supervisors: Sean Emery; Andrew Carr (St Vincent's Hospital); Janaki Amin

### **William Hey-Cunningham**

Delineation of the latent HIV reservoir with subpopulations of Memory CD4 T cells

Supervisors: Tony Kelleher, Kersten Koelsch, John Zaunders (SVH)

### **Denise Chee Hsu**

Using novel biomarkers to define the role of TB specific effector T cell and TB specific regulatory T cell in patients with Mycobacterium tuberculosis (TB) and HIV co-infection

Supervisors: David Cooper; Jintanat Ananworanich (HIVNAT); Tony Kelleher

### **Tina Iemma**

The Role of Dynamin-II in HIV Pathogenesis

Supervisors: Stuart Turville; Phillip Robinson (University of Sydney)

### **Mofizul Islam**

The impact of targeted primary health care on injecting drug users' health  
Co-supervisor: Libby Topp

### **Jennifer Iversen**

Enhanced sentinel sero-surveillance among people who inject drugs in Australia

Supervisors: Lisa Maher; Libby Topp; Handan Wand

### **Brendan Jacka**

Viral epidemiology of multiple Hep C infections in international high risk populations

Supervisors: Tanya Applegate; Jason Grebely; Greg Dore

### **James Jansson**

Mapping HIV outcomes: geographical and clinical forecasts of people living with HIV in Australia

Supervisors: David Wilson, Richard Gray

### **Amy Kwon**

Using mathematical modelling to evaluate public health interventions for viral epidemics

Supervisors: David Wilson; Rosie Thein; Cliff Kerr

### **Linh-Ve Le**

HIV incidence and predictors of sexual and drug injecting behavioural risk among female sex workers/men who have sex with men in Vietnam

Supervisors: John Kaldor; Lisa Maher; Keith Sabin (WHO, Hanoi)

### **Frederick Ji-Yoon Lee**

Chronic non-AIDS effects of HIV infection and anti-retroviral therapies.

Andrew Carr

**Scott Ledger**

The effects of anti-attachment and fusion inhibitor gene-therapies in the protection of HIV susceptible cells

Supervisors: Geoff Symonds, John Murray

**Dorothy Machalek**

The natural history of anal human papillomavirus infection and anal cellular abnormalities in mature aged homosexual men

Supervisors: Andrew Grulich, Jeff Jin, Mary Poynten

**Kylie-Ann Mallitt**

Geospatial Models of HIV Transmission

Supervisors: Handan Wand, David Wilson

**Allison Martin (Humphries)**

Toxicities associated with antiretroviral treatment of HIV-1 antiretroviral treatment effects on HIV Infection

Supervisors: Sean Emery, Janaki Amin, Andrew Carr (St Vincent's Hospital)

**Elizabeth Mlambo**

Developing enhanced surveillance and evaluating available data for monitoring HIV among culturally and linguistically diverse (CALD) populations living in Australia.

Supervisors: David Wilson, Rebecca Guy

**Kristin McBride**

Studies of the latent reservoirs of HIV-1

Supervisors: David Cooper; Tony Kelleher; Kersten Koelsch

**Skye McGregor**

Capacity building for health research in developing countries

Supervisors: John Kaldor, Klara Henderson

**Hamish McManus**

Evaluation of survival in HIV-positive patients

Supervisors: Kathy Petoumenos, Matthew Law

**Catalina Mendez**

Understanding siRNA induced transcriptional silencing of HIV-1.

Supervisors: Tony Kelleher, Kazuo Suzuki (St. Vincent's Hospital)

**Brian Mulhall**

Sexually transmitted infections (STI) in patients in the Australian HIV

Observational Database

Supervisors: Matthew Law, Christopher Fairley (University of Melbourne).

**Mee Ling Munier**

The role of HIV-specific CD4+ T-cells at primary infection

Supervisors: Tony Kelleher; Bill Sewell (Garvan Institute); John Zaunders (St Vincent's Hospital)

**Daniel Murray**

The role of microRNAs in HIV-1 infection and pathogenesis

Supervisors: Tony Kelleher, Kazuo Suzuki

(St. Vincent's Hospital)

**Lisa Natoli**

Supervisor: Rebecca Guy

**Chansavath Phetsouphanh**

Characterisation of CD4+ Antigen specific T cells to HIV

Supervisors: Tony Kelleher, Nabila Seddiki

**Suzanne Polis**

Adherence to hepatitis B antiviral therapies

Supervisors: Lisa Maher, Armany Zekry (St George Hospital)

**Phillip Read**

Clinical and epidemiological aspects of syphilis

Rebecca Guy, Basil Donovan,

**Lucia Romani**

Factors associated with scabies in a highly endemic population

Supervisors: John Kaldor, Andrew Steer (Murdoch Childrens Research Institute)

**Karen Schneider**

Economic evaluation of HIV monitoring

Supervisors: David Wilson; Matthew Law; Basil Donovan

**Kirstine Sutherland Smith**

Home-based sample collection to increase chlamydia retesting and detect reinfections following treatment.

Supervisor : Rebecca Guy

**Sowbhagya Somanadhan**

Influence of civil society on HIV policies and services in India and the participation of people living with HIV/AIDS

Supervisor: Lisa Maher

**Dam Anh Tran**

Accessibility to anti retroviral (ARV) treatment in Vietnam.

Supervisors: Lei Zhang, Anthony Shakeshaft (NDARC), David Wilson, Chris Doran (University of Newcastle)

**Winnie Wing Yin Tong**

Measurement of immune responses to clinically significant viral pathogens in immunocompromised adults

Supervisors: Andrew Carr (St Vincent's Hospital), Tony Kelleher

**Lucy Alexandra Watchirs Smith**

Supervisor: Bette Liu

**Edward (Ned) Waters**

The analysis, ecology and implications of HPV variants in HPV related cancers.

Supervisors: David Regan; David Philp (SPHCM); Andrew Grulich; Anthony Smith

**Chris Weatherall**

Immunology of HIV infection

Supervisors: Tony Kelleher, David Cooper

**Bethany White**

Hepatitis C vaccine preparedness

Supervisors: Lisa Maher, Greg Dore

**Stephen Wright**

Antiretroviral therapies and immunological outcomes in HIV-positive patients

Supervisors: Kathy Petoumenos, Matthew Law

**Yin Xu**

Mechanisms for SIV entry into T follicular helper cells

Supervisors: Tony Kelleher, John Zaunders

## MASTERS STUDENTS AT THE KIRBY INSTITUTE

**Anna Charisse Farr**

Evaluation of HIV in the Philippines (Masters by Research)

Supervisor: David Wilson

**Belinda Hengel**

What works? Improving Primary Health Care Centre access and STI amongst young people in remote Aboriginal and Torres Strait Islander communities in Australia

Supervisors: John Kaldor; Rebecca Guy; Lisa Maher

**Phillip Keen**

Late HIV diagnoses among gay and other men who have sex with men in Australia between 2003–2012

Supervisor: Garrett Prestage

**Rebecca Lorich**

Role of the Practice Nurse in chlamydia testing in general practice

Supervisors: Rebecca Guy, Jane Hocking and Meredith Temple-Smith (both University of Melbourne)

**Tarana Lucky** Masters by Research

Using quantitative techniques to improve monitoring and evaluation of HIV epidemics in Australia

Supervisors: David Wilson, Handan Wand

**Quang Duy Pham**

Modelling HIV drug resistance in Vietnam

Supervisors: Lei Zhang, David Wilson

**Bronwyn Silver**

Sexual and reproductive health of Aboriginal women in remote communities

Supervisors: John Kaldor; Rebecca Guy; Alice Rumbold (Menzies School of Health Research)

**James Ward**

Sexual health and risk factors among young Aboriginal people

Supervisors: John Kaldor, Basil Donovan

## SUPERVISION OF NON-KIRBY INSTITUTE STUDENTS

**Leon Pierre Botes** (The University of Sydney) PhD Candidate

Validation of the acceptability and reliability of self collected anal swabs used for cytological screening, to detect anal squamous intra-epithelial lesions in HIV-positive men who have sex with men

Supervisor: Richard Hillman, Jeff Jin  
**Danielle Horyniak** (Monash University)

Improving health and reducing harm  
among young people who inject drugs

Co-supervisor: Peter Higgs

**Robert Kemp** (University of  
Queensland)

Development of the Needle and Syringe  
Program in Queensland

Co-supervisor: Lisa Maher

**Stephen Lambert** (University of  
Queensland)

Chlamydia in the Australian Defence Forces

Supervisors: Scott Kitchener (University  
of Queensland), Basil Donovan

**Samantha McAllery** (University of  
Sydney)

Proteomics of True de novo HIV in the  
Context of Productive Infection

Supervisor: Stuart Turville

**Loay Othman** (La Trobe University),  
PhD Candidate

HIV and stigma in the United Arab  
Emirates

Supervisor: Garrett Prestage

**Tim Read** (Melbourne University), PhD  
Candidate

Sexually transmitted viruses in men  
having sex with men

Supervisors: Christopher Fairley, Andrew  
Grulich

**Rachel Sacks-Davis** (Monash  
University)

Hepatitis C virus transmission and  
progression in cohorts of people who  
inject drugs

Supervisors: Margaret Hellard and  
Campbell Aitken (Burnet Institute);  
Jason Grebely

**Ivy Shih** (University of Sydney)

Characterization of Human  
Immunodeficiency Virus (HIV) spread  
between physiologically relevant cell  
targets of the immune system

Supervisor: Stuart Turville, N Nasr  
(University of Sydney)

**Huachun Zou** (University of  
Melbourne), PhD Candidate

HPV infection in young men who have  
sex with men

Supervisors: Marcus Chen (Melbourne),  
Andrew Grulich

**Karen Hawke** (University of South  
Australia)

Epidemiology of HIV resistance and  
subtypes in South Australia

Co-supervisor: John Kaldor



# ■ COLLABORATING ORGANISATIONS 2012

## NATIONAL

Association for Prevention and Harm Reduction Programs (ANEX), Melbourne  
Australasian Chapter of Sexual Health Medicine, Sydney  
Australasian Faculty of Public Health Medicine, Sydney  
Australasian Professional Society on Alcohol and other drugs (APSAD)  
Australasian Society for HIV Medicine, Sydney  
Australasian Society of Clinical Immunology and Allergy (ASCI)  
Primary Immunodeficiency Register, Sydney  
Australia and New Zealand Cardiothoracic Transplant Registry, Sydney  
Australia and New Zealand Dialysis and Transplant Registry (ANZDATA), Adelaide  
Australia and New Zealand Liver Transplant Registry, Brisbane  
Australian Agency for International Development (AusAID), Canberra  
Australian Centre for Hepatitis and HIV Virology Research (ACH<sup>2</sup>), UNSW, Sydney  
Australian Centre for Perinatal Science (ACPS), Sydney  
Australian Federation of AIDS Organisations, Sydney  
Australian Gonococcal Surveillance Program, Sydney  
Australian Government Department of Health and Ageing, Canberra  
Australian Injecting and Illicit Drug Users League (AIVL), Canberra  
Australian Institute of Health and Welfare, Canberra  
Australian Liver Association, Sydney  
Australian Paediatric Surveillance Unit, Sydney  
Australian Red Cross Blood Service, Sydney  
Australian Research Centre in Sex, Health and Society, La Trobe University, Melbourne  
Canberra Alliance for Harm Minimisation

and Advocacy (CAHMA)  
Communicable Diseases Network Australia, Canberra  
Hepatitis Australia, Canberra  
Immunovirology Research Network (IVRN), UNSW, Sydney  
Inflammation and Infection Research Centre UNSW  
National Aboriginal Community Controlled Health Organisation, Canberra  
National Association of People with HIV Australia, Sydney  
National Centre for Epidemiology and Population Health, Australian National University, Canberra  
National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases, Sydney  
National Centre in HIV Social Research, UNSW, Sydney  
National Drug and Alcohol Research Centre, UNSW, Sydney  
National Serology Reference Laboratory, Australia, Melbourne  
National Trachoma Surveillance Reference Group  
Office of Aboriginal and Torres Strait Islander Health (OATSIH), Canberra  
Phase Forward Pty Ltd, Sydney  
Public Health Laboratory Network  
Royal Australasian College of Physicians, Sydney  
Royal Australian and New Zealand College of Psychiatrists  
Therapeutic Goods Administration, Canberra

## AUSTRALIAN CAPITAL TERRITORY

ACT Health  
AIDS Action Council of the ACT  
Canberra Sexual Health Centre, Canberra Hospital  
Canberra University  
Communicable Disease Control Program, ACT Health, Canberra  
Directions ACT, Canberra

Interchange General Practice, Canberra  
John Curtin School of Medical Research, Australian National University, Canberra  
Microbiology Department Canberra Hospital, Woden  
National Centre in Epidemiology and Population Health, Australian National University, Canberra  
Sexual Health and Family Planning ACT  
The Canberra Hospital, Canberra  
Winnunga Nimmityjah Aboriginal Health Services, Canberra

## NEW SOUTH WALES

Aboriginal Health and Medical Research Council of NSW  
Aboriginal Medical Service Western Sydney, Mount Druitt Village  
AIDS Council of NSW (ACON), Sydney, Lismore, Newcastle, Penrith, Port Macquarie and Wollongong  
AIDS Project Management Group  
Albion Street Centre, Sydney  
Albury Community Health Centre, Albury  
Armajun Aboriginal Health Service Incorporated, Inverell  
Bigge Park Medical Centre, Sydney  
Blacktown Needle and Syringe Program Services, Sydney  
Blue Mountains Sexual Health Clinic, Katoomba  
Burwood Road General Practice, Sydney  
Central Access Service, Sydney  
Central Coast Harm Reduction Service, Gosford, Long Jetty and Woy Woy  
Central Coast NSP Services, Gosford and Long Jetty  
Centre for Addiction Medicine, Westmead Hospital  
Centre for Health Informatics, UNSW  
Centre for Health Initiatives, University of Wollongong  
Centre for Health Protection, NSW Ministry of Health, Sydney  
Centre for Health Research in Criminal Justice, Justice Health, NSW Health Department, Sydney  
Centre for Infection and Inflammation

Research, School of Medical Sciences, UNSW  
 Centre for Immunology, St Vincent's Hospital, Sydney  
 Centre for Learning and Change, University of Technology, Sydney  
 Centre for Values, Ethics and the Law in Medicine, University of Sydney  
 Centre for Vascular Research, UNSW Clinic 16, Royal North Shore Hospital, Sydney  
 Clinic 180, Sydney  
 Communicable Diseases Branch, NSW Health Department, Sydney  
 Coffs Harbour Sexual Health Clinic  
 Concord Hospital, Sydney  
 Department of Microbiology, South Eastern Area Laboratory Services, Prince of Wales Hospital, Sydney  
 Douglass Hanly Moir Pathology  
 Dubbo Sexual Health Centre, Dubbo  
 Durri Aboriginal Corporation Medical Service, Kempsey  
 East Sydney Doctors, Sydney  
 Family Planning NSW  
 Far West Local Health District  
 First Step Program, Port Kembla and Nowra  
 Garvan Institute of Medical Research, Sydney  
 Gateway Opioid Treatment Service Clinic, Nepean Hospital  
 General Medical Practice, Coffs Harbour  
 Grafton Sexual Health Clinic, Grafton  
 Greater Western Area Health Service  
 Harm Reduction and Viral Hepatitis Branch, Centre for Population Health, NSW Ministry of Health  
 Health ConneXions Harm Reduction Program, Liverpool  
 Hepatitis NSW (*formerly* Hepatitis C Council of NSW), Sydney  
 Holden Street Clinic, Gosford  
 Holdsworth House Medical Practice, Sydney and Byron Bay  
 Hunter Harm Reduction Services, Newcastle  
 Hunter New England Local Health District  
 Hunter New England Sexual Health Service  
 Hunter Pharmacotherapy Services  
 Illawarra Aboriginal Medical Service  
 Aboriginal Corporation, Wollongong  
 Illawarra Sexual Health, Wollongong and Port Kembla  
 Illawarra Shoalhaven Local Health District  
 John Hunter Hospital, Newcastle  
 Justice Health, NSW Health, Sydney  
 Kelly Close NSP Service, Mt Druitt  
 Kirketon Road Centre, Sydney  
 Kite Street Community Health Centre, Orange  
 Lismore/ Tweed Heads Sexual Health & AIDS Services (also known as Sexual Health and Infectious Diseases Service (SHAIDS), Lismore)  
 Liverpool Hospital, Sydney  
 Liverpool Sexual Health Clinic, Sydney  
 Macquarie Sexual Health Centre, Dubbo  
 Mid North Coast Local Health District  
 Harm Reduction Services  
 Multicultural HIV/AIDS and Hepatitis C Service, Sydney  
 Murrumbidgee Local Health District  
 Nepean Blue Mountains Local Health District  
 Nepean Hospital, Sydney  
 Nepean Sexual Health Clinic  
 North Coast Area Health Service, Harm Reduction Services  
 Northern Sydney Central Coast Area Health Service, NSW Health, Sydney  
 Northern Sydney Sexual Health Service  
 Northern NSW Local Health District  
 Harm Reduction Services  
 NSW Centre for Health Record Linkage, Sydney  
 NSW Health, Sydney  
 NSW Health, Mental health and Drug and Alcohol Office, Sydney  
 NSW State Reference Laboratory for HIV/AIDS, St Vincent's Hospital, Sydney  
 NSW Users and AIDS Association (NUAA), Sydney  
 Orange Sexual Health Clinic  
 Parramatta Needle and Syringe Program Services, Sydney  
 Parramatta Sexual Health Clinic, Sydney  
 Perinatal and Reproductive Epidemiology Research Unit, incorporating the National Perinatal Statistics Unit, UNSW  
 Port Kembla Sexual Health Clinic, Warrawong  
 Positive Life NSW  
 Prince of Wales Hospital, Sydney  
 Rankin Court Treatment Centre, Sydney  
 Resource and Education Program for Injecting Drug Users (REPIDU), Sydney  
 Royal North Shore Hospital, Sydney  
 Royal Prince Alfred Hospital, Sydney  
 Royal Prince Alfred Hospital Clinic 36  
 Outreach Clinic, Sydney  
 Royal Prince Alfred Hospital (RPA) Drug Health Services, Sydney  
 Royal Prince Alfred Hospital Regent House Outreach Clinic, Sydney  
 Royal Prince Alfred Hospital (RPA) Sexual Health Clinic, Sydney  
 Sax Institute, Sydney  
 School of Biotechnology and Biomolecular Sciences, UNSW  
 School of Mathematics, UNSW  
 School of Medical Sciences, UNSW  
 School of Public Health, University of Sydney  
 School of Public Health and Community Medicine, UNSW  
 Sex Workers Outreach Project (SWOP), Sydney  
 South Court Primary Care Needle and Syringe Program, Sydney  
 Southern NSW Local Health District  
 South Eastern Area Laboratory Services (SEALS), Prince of Wales Hospital  
 South Eastern Sydney Local Health District  
 South Western Sydney Local Health District  
 Speedx Pty Ltd, Sydney  
 St George Hospital, Sydney  
 St George Hospital Short Street Sexual Health Clinic  
 St Leonards Medical Centre  
 St Vincent's Hospital, Sydney  
 St Vincent's Centre for Applied Medical Research  
 St Vincent's Clinic Bone Densitometry  
 St Vincent's Medical Imaging, Sydney  
 Sydney Children's Hospital, Randwick  
 Sydney Local Health District  
 Sydney Medical School, University of Sydney  
 Sydney Medically Supervised Injecting Centre  
 Sydney Sexual Health Centre  
 SydPath, Sydney  
 Tamworth Sexual Health Service, Tamworth  
 Taree Manning Clinic  
 Taylor Square Private Clinic, Sydney  
 The Byrne Surgery, Sydney  
 The Cancer Council NSW, Sydney  
 The Children's Hospital, Westmead  
 University of Sydney – Discipline of Addiction Medicine, Sydney  
 University of Technology – Faculty of Nursing, Midwifery and Health  
 UNSW Cancer Research Centre, integrated cancer research group  
 Wagga Wagga Community Health Centre  
 Wellington Aboriginal Corp Health Service, Wellington  
 Western NSW Local Health District  
 Western Sydney Aboriginal Medical Service Mt Druitt  
 Western Sydney Local Health District  
 Westmead Hospital, Sydney  
 Westmead Millennium Institute for Medical Research, Sydney  
 Woodlands Clinic, Blue Mountains Anzac Memorial Hospital, Katoomba

## NORTHERN TERRITORY

Aboriginal Community Controlled Health Services, Northern Territory  
 Aboriginal Medical Services Alliance Northern Territory, Darwin  
 AIDS/STI Program, Disease Control, Department of Health and Community Services, Darwin  
 Alice Springs Sexual Health Service Clinic 34  
 Baker IDI Heart and Diabetes Institute, Alice Springs

Communicable Disease Centre, Royal Darwin Hospital, Darwin  
 Darwin Sexual Health Service  
 Family Planning Northern Territory, Coconut Grove  
 Menzies School of Health Research, Casuarina  
 Microbiology Laboratory, Royal Darwin Hospital  
 Northern Territory Sexual Health and BBV Unit  
 Northern Territory AIDS and Hepatitis C Council, Alice Springs, Darwin and Palmerston  
 Northern Territory Department of Health and Families  
 Western Diagnostic Pathology

## QUEENSLAND

AIDS Medical Unit, North Quay  
 Apunipima Cape York Health Council, BungalowBiala Alcohol and Drug Services, Brisbane  
 Australasian Leukaemia and Lymphoma Group (AALG) Tissue Bank  
 Biala Alcohol and Drug Treatment Services, Brisbane  
 Brisbane Sexual Health & HIV Service (formerly AIDS Medical Unit, Queensland Health)  
 Cairns Base Hospital  
 Cairns Base Hospital NSP Services  
 Cairns ATODS NSP Service  
 Cairns Sexual Health Service (also known as the Dolls House Sexual Health Clinic)  
 Clinic 87, Sunshine Coast-Wide Bay Health Service District, Nambour  
 Clinical Medical Virology Centre, University of Queensland  
 Communicable Disease Unit, Queensland Health, Brisbane  
 Gladstone Road Medical Centre, Brisbane  
 Gold Coast Sexual Health Clinic, Miami  
 Goondir Health Service, Dalby  
 Kobi House, Toowoomba  
 James Cook University, Cairns  
 Princess Alexandra Hospital, Brisbane  
 Princess Alexandra Sexual Health, South Brisbane  
 Queensland Aboriginal and Islander Health Council, Brisbane  
 Queensland Health, Brisbane  
 Queensland Health Scientific Services, Coopers Plains  
 Queensland Injectors Health Network (QuIHN), Brisbane, Gold Coast and Sunshine Coast  
 Queensland Paediatric Infectious Diseases Laboratory, Queensland Children's Medical Research Institute  
 Queensland Positive People  
 Queensland University of Technology, Brisbane

Royal Brisbane and Women's Hospital, Brisbane  
 School of Population Health, The University of Queensland, Brisbane  
 Sexual Health & HIV Service, Brisbane  
 Spiritus Positive Directions  
 Townsville Aboriginal and Islanders Health Services Ltd, Townsville  
 Townsville ATODS NSP Service  
 Townsville Sexual Health Services  
 West Moreton Sexual Health Service, QLD

## SOUTH AUSTRALIA

Aboriginal Community Controlled Health Services, South Australia  
 Adelaide Sexual Health Clinic 275  
 AIDS Council of South Australia (ACSA), Adelaide  
 Drug and Alcohol Services South Australia (DASSA), Adelaide  
 Communicable Disease Control Branch, SA Health  
 Country Health, Adelaide  
 Department of Health  
 Flinders Clinical Trials Pharmacy, Adelaide  
 Harm Minimisation Program, Hindmarsh Centre, Adelaide  
 Infectious Diseases Laboratories, Institute of Medical and Veterinary Science, Adelaide  
 Institute of Medical and Veterinary Science (IMVS)  
 Microbiology and Infectious Diseases Department, SA Pathology at Women's and Children's Hospital, North Adelaide  
 Noarlunga Community Health Services, Adelaide  
 Nunkuwarrin Yunti of South Australia Inc, Adelaide  
 O'Brien Street Practice, Adelaide  
 Parks Community Health Services, Adelaide  
 Positive Life SA  
 Port Adelaide Community Health Service, Port Adelaide  
 Radiology SA, Adelaide  
 Royal Adelaide Hospital, Adelaide  
 Royal Adelaide Hospital Clinic 275  
 Sexually Transmitted Diseases (STD) Services, Internal Medicine Service, Royal Adelaide Hospital  
 South Australian Health Department  
 South Australian Voice for Intravenous Education (SAVIVE) Noarlunga, Norwood, Parks, Port Adelaide  
 STI and BBV Section, Communicable Disease Control Branch, SA Health, Adelaide  
 The Care and Prevention Program, Adelaide University, Adelaide  
 University of Adelaide

## TASMANIA

Anglicare NSP Services, Glenorchy and Hobart  
 Clarence Community Health Service, Hobart  
 Department of Health and Human Services Tasmania  
 Hobart, Devonport and Launceston Sexual Health Service  
 Salvation Army Launceston  
 Tasmanian Council on AIDS, Hepatitis and Related Diseases (TasCAHRD), Hobart  
 Tasmanian Aboriginal Centre, Hobart

## VICTORIA

Alfred Radiology, Melbourne  
 Barwon Drug and Alcohol Services, Geelong  
 Burnet Institute, Melbourne  
 Centre for Population Health, Burnet Institute, Melbourne  
 Centre for Women's Health, Gender and Society, Melbourne School of Population Health, University of Melbourne  
 Darebin Community Health Centre, Northcote  
 Deakin Health Economics Unit, Deakin University, Melbourne  
 Deakin University, Melbourne  
 Department of Health, Victoria  
 Department of Microbiology and Immunology, The University of Melbourne, Melbourne  
 Harm Reduction Victoria  
 Health Informatics Unit, Rural Health Academic Centre, University of Melbourne  
 Health Information Exchange, Salvation Army, Melbourne  
 Health Works, Footscray  
 Indigenous Eye Health Unit, School of Population Health, The University of Melbourne  
 Inner Space, Melbourne  
 La Trobe University, Melbourne  
 Living Positive Victoria  
 Melbourne Sexual Health Centre  
 The Microbiological Diagnostic Unit, University of Melbourne  
 Middle Park Clinic, Melbourne  
 Monash Medical Centre, Melbourne  
 Murdoch Childrens Research Institute, Melbourne  
 National Reference Laboratory  
 Nexpep, Victoria  
 North Richmond Drug Safety Program, Melbourne  
 Northside Clinic, Fitzroy North  
 Nossal Institute  
 Prahran Market Clinic, Melbourne  
 Royal Melbourne Hospital, Melbourne  
 Royal Women's Hospital, Melbourne  
 School of Population Health, The

University of Melbourne, Melbourne  
 Southern Hepatitis/HIV/AIDS Referral & Prevention Service (SHARPS), Frankston  
 St Vincent's Hospital, Melbourne  
 The Alfred Hospital, Melbourne  
 The Centre Clinic, Melbourne  
 The University of Melbourne  
 Victorian Aboriginal Community Controlled Health Organisation, Melbourne  
 Victorian Aboriginal Health Service, Fitzroy  
 Victorian AIDS Council/Gay Men's Health Centre (GMHC), Melbourne  
 Victorian Cervical Cytology Registry  
 Victorian Cytology Service Inc, Melbourne  
 Victorian Infectious Diseases Reference Laboratory, Melbourne

## WESTERN AUSTRALIA

Aboriginal Community Controlled Health Services, Western Australia  
 Aboriginal Health Council of Western Australia, Perth  
 Centre for Clinical Immunology and Biomedical Statistics, Perth  
 Communicable Disease Control Branch, Department of Health, Perth  
 Curtin University of Technology  
 Data Linkage Western Australia, Perth  
 Department of Health, Western Australia  
 Department of Microbiology and Infectious Diseases, PathWest Laboratory Medicine, Royal Perth Hospital  
 Derbarl Yerrigan Health Service, Perth  
 Fremantle Hospital  
 Fremantle Hospital Sexual Health Service  
 Kimberley Aboriginal Medical Services Council, Broome  
 M Clinic  
 Murdoch University, Perth  
 National Drug Research Institute, Curtin University of Technology  
 Royal Perth Hospital, Perth  
 Royal Perth Hospital Sexual Health Clinic  
 Royal Perth Hospital, Department of Clinical Immunology  
 Sexual Health and Blood Borne Virus Program, Department of Health, Perth  
 University of Western Australia, Perth  
 WA AIDS Council Mobile Exchange, Perth  
 Western Australian AIDS Council (WAAC), Perth  
 Western Australia Country Health Service (WACHS), Perth  
 Western Australian Substance Users Association (WASUA), Perth

## INTERNATIONAL

1 Military Hospital, Pretoria, South Africa  
 Academic Medical Centre, University of Amsterdam, Amsterdam  
 Africa Centre for Health and Population

Studies, University of Kwzulu-Natal, South Africa  
 Agence Nationale de Sécurité du Médicament et des Produits de Santé, France  
 ANMAT, Argentina  
 Arkansas Children's Hospital Research Institute  
 ARUD (Arbeitsgemeinschaft für risikoarmen Umgang mit Drogen), Zurich, Switzerland  
 Asian Network of People Who Use Drugs (ANPUD)  
 Auckland University of Technology  
 Avdeling Spesialiserte Ruspoliklinikker, Norway  
 Bach Mai Hospital, Hanoi, Vietnam  
 Bamrasnaradura Hospital, Bangkok  
 Barts and the London NHS Trust, London, UK  
 Beijing Ditan Hospital, Beijing  
 BFARM, Germany  
 Bill and Melinda Gates Foundation  
 Bingham University Teaching Hospital, Jos, Nigeria  
 Brighton & Sussex University NHS Trust, Argentina  
 British Columbia Centre for Disease Control, Vancouver, Canada  
 British Columbia Centre for Excellence in HIV/AIDS, Vancouver, Canada  
 Brown University, Providence, USA  
 CAICI, Rosario, Argentina  
 CAICI, Rosario, Argentina  
 Calgary Regional Health Authority, Canada  
 Cambodian Women's Development Association (CWDA)  
 Canadian Aboriginal AIDS Network  
 CEADI, Buenos Aires, Argentina  
 CEIN – Unidad Infectológica de Prevención, Diagnóstico y Tratamiento. Neuquén, Argentina  
 Centers for Disease Control and Prevention, USA  
 Centre for Infectious Disease Prevention and Control, Health Canada  
 Centre for Excellence in HIV/AIDS, Vancouver, British Columbia, Canada;  
 Centre for Research on Drugs and Health Behaviour, London School of Hygiene & Tropical Medicine, UK  
 CETI, La Plata, Buenos Aires, Argentina  
 Chaing Mai University, Chaing Mai, Thailand  
 Chelsea and Westminster Hospital, London  
 Chiang Rai Regional Hospital, Chiang Rai, Thailand  
 Children Hospital No. 1, Ho Chi Min City, Vietnam  
 Children Hospital No. 2, Ho Chi Min City, Vietnam  
 Chonburi Regional Hospital, Chonburi, Thailand  
 Chris Hani Baragwanath Hospital, Soweto, South Africa

Chulalongkorn Hospital, Bangkok  
 Cipto Mangunkusumo General Hospital, Jakarta  
 Clinica Alemana, Argentina  
 Clinique OPUS/LORI, Montreal, Canada  
 Clinton HIV/AIDS Initiative  
 Columbia University, New York, USA  
 Concept Center for Addiction Treatment, Munich, Germany  
 Concerted Action on Seroconversion to AIDS and Death in Europe (CASCADE) and its contributors, Coordinating Unit, London  
 Copenhagen HIV Programme, Hvidovre University Hospital, Copenhagen  
 Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, Baltimore USA  
 Department of Statistical Science, University College, London, UK  
 Desmond Tutu HIV Foundation, Cape Town, South Africa  
 Division of Infectious Diseases, Department of Internal Medicine, Yonsei University College of Medicine, Seoul  
 Duke Clinical Research Institute, Duke University, Durham, North Carolina, USA  
 East Toronto Hepatitis C Program, Toronto, Canada  
 ESPOO Treatment and Rehabilitation A-Clinic, Finland  
 Faculté Créteil Henri Mondor, Créteil, France  
 Faculty of Medicine, Udayana University and Sanglah Hospital, Denpasar, Bali, Indonesia  
 Family Health International (FH), Cambodia  
 FHI 360 Cambodia  
 Foundation for AIDS Research (amfAR), New York  
 Fundacion Arriaran, Santiago, Chile  
 Fundacion Centro de Estudios Infectologicos (FUNCEI), Clinica La Sagrada Familia, Buenos Aires  
 Fundacion IDEAA, Argentina  
 Fundación IDEAA, Buenos Aires, Argentina  
 Gemeinschaftspraxis Jessen, Berlin, Germany 3  
 German Cancer Research Center, Heidelberg  
 Goroka General Hospital, Goroka, Papua New Guinea  
 Hanoi School of Public Health, Vietnam  
 HART Consulting, Malaysia  
 Harvard University, Boston  
 Health Canada  
 Health Research Council of New Zealand  
 HIV Netherlands, Australia, Thailand Research Collaboration (HIV-NAT), Thailand  
 Hôpital Pitié-Salpêtrière, Paris  
 Hôpital Saint-Louis, Paris  
 Hospital Almenara, Lima, Peru

Hospital Central, Mendoza, Argentina  
Hospital Clínic de Barcelona, Spain  
Hospital CLÍNICO Universitario de Valencia, Spain  
Hospital de la Santa Creu i Sant Pau, Barcelona, Spain  
Hospital de la Universidad Católica Pontificia, Santiago, Chile  
Hospital Dos de Mayo, Lima, Peru  
Hospital Dr Diego Paroissien, Argentina  
Hospital General de Agudos JM Ramos Mejia, Buenos Aires  
Hospital General de Agudos Teodoro Álvarez, Buenos Aires  
Hospital General de Guadalajara, Mexico  
Hospital General de Leon, Mexico  
Hospital General Universitario Gregorio Marañón (HGUGM), Spain  
Hospital Germans Trias i Pujol, Badalona, Spain  
Hospital Interzonal General de Agudos Dr. Diego Paroissien, Buenos Aires, Argentina  
Hospital Italiano de Buenos Aires, Buenos Aires, Argentina  
Hospital Kuala Lumpur, Malaysia  
Hospital La Paz, Madrid, Spain  
Hospital Likas, Kota Kinabalu, Malaysia  
Hospital Nacional Prof Dr Alejandro Posadas, Buenos Aires  
Hospital Paroissien, Buenos Aires, Argentina  
Hospital Principe de Asturias, Madrid, Spain  
Hospital Privado - Centro Médico de Córdoba, Argentina  
Hospital Pulau Pinang, Malaysia  
Hospital Raja Perempuan Zainab II, Kelantan, Malaysia  
Hospital Rawson, Bajada Pucara, Argentina  
HOSPITAL REGIONAL CARLOS HAYA DE MÁLAGA, Spain  
Hospital San Borja-Arriaran, Santiago, Chile  
Hospital Sungai Buloh, Kuala Lumpur  
Hospital Universitari i Politecnic La Fe, Spain  
ICH Study Center Hamburg Klinik für Immunologie und Rheumatologie, Medizinische Hochschule Hannover  
IMPACTA, Lima, Peru  
Imperial College, St Mary's Hospital, London  
Indonesia National AIDS Commission, Indonesia  
Indonesian Ministry of Health, Indonesia  
Infections and Immunity, Avenir Group, Hôpital Pitié Salpêtrière, Université Pierre et Marie Curie-Paris, France  
Institut für Virologie, der Universität zu Köln, Cologne, Germany  
Institute of Human Virology Nigeria (IHVN), Abuja, Nigeria  
Institute of Infectious Disease, Pune, India  
Institute of Social and Preventative Medicine, University of Bern, Switzerland  
Instituto de Enfermedades Tropicales Alexander von Humboldt Baumgarten, MIB medical center for infectious diseases  
Instituto de Medicina Tropical Alexander von Humboldt, Lima, Peru  
Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirián, Mexico City  
Integrated Treatment Centre, Hong Kong  
International AIDS Society, Geneva  
International Consortium of Investigators Working on Non-Hodgkin's Lymphoma  
Epidemiologic Studies (InterLymph)  
Irish Medicines Board  
Johann Wolfgang Goethe-University Hospital, Medical HIVCENTER  
Johns Hopkins University, Baltimore  
Jos University Teaching Hospital, Jos, Nigeria  
JOSHA Research, Bloemfontein, South Africa  
JW Goethe Universität, Frankfurt  
Khon Kaen Hospital, Khon Kaen, Thailand  
Khon Kaen University, Khon Kaen, Thailand  
Klinikum der Universität Zu Köln  
Koda Bern/Poliklinik Für Infektiologie, Bern Switzerland  
Kumamoto University, Japan  
La Agencia Española de Medicamentos y Productos Sanitarios, Spain  
Mai Hoa Do Consulting, Vietnam  
Malaysian AIDS Council, Malaysia  
Malaysian Ministry of Health, Malaysia  
Malaysia National Anti-Drug Agency, Malaysia  
Malaysian Prison Department, Malaysia  
Massachusetts General Hospital, Boston  
Mater Misericordiae University Hospital, Dublin  
Medical Group Practice, Berlin 3  
Medical Research Council, Durban, South Africa  
Medical Research Council Clinical Trials Unit, London  
MHRA, UK  
Ministry of Health and Population, Nepal  
Ministry of Health Japan  
Ministry of Health, Chile  
Ministry of Health, Mexico  
Ministry of Public Health, Bangkok  
Mt Hagen General Hospital, Mt Hagen, Papua New Guinea  
Nagoya Medical Centre, Nagoya, Japan  
Nantong University, China  
National Cancer Institute, National Institutes of Health, Bethesda, USA  
National Center for Global Health and Medicine, Tokyo, Japan  
National Center for HIV/AIDS, Dermatology and STDs (NCHADS), Phnom Penh  
National Center for AIDS/STD Control and Prevention, China  
National Development and Research Institutes, New York  
National Epidemiology Center, Department of Health, Philippines  
National Harm Reduction Association, Nepal  
National Hospital for Tropical Diseases, Hanoi, Vietnam  
National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, USA  
National Institute of Hygiene and Epidemiology (NIHE), Vietnam  
National Institute on Drug Abuse, National Institutes of Health, Bethesda, USA  
National Institute of Public Health, Cambodia  
National Taiwan University Hospital, Taipei  
Ngā Pae o te Māramatanga, University of Auckland  
Nottingham University Hospitals NHS Trust, Nottingham, UK  
NRL, Fitzroy, Victoria, Australia;  
Orleans hospital (CHR Orleans La Source), Orleans, France  
Oslo University Hospital, Oslo, Norway  
P.H. Diagnostic Centre, Pune, India  
Papua New Guinea Institute for Medical Research (PNGIMR), Goroka, Papua New Guinea  
Papua New Guinea National AIDS Council (NAC), Port Moresby, Papua New Guinea  
Papua New Guinea National Department of Health (NDoH), Port Moresby, Papua New Guinea  
Pacific Adventist University (PAU), Port Moresby, Papua New Guinea  
Port Moresby General Hospital, Port Moresby, Papua New Guinea  
Papua New Guinea Institute for Medical Research, Goroka, Papua New Guinea  
Partners AIDS Research Center, Boston  
Pasteur Institute, France  
Philippines National AIDS Council  
Plateau State Specialist Hospital, Jos, Nigeria  
Praxiszentrum Im Tal (PIT), Ludwig-Maximilians-Universität, Munich, Germany  
Providence Health Care, Vancouver  
Public Health Service (GGD), Amsterdam, the Netherlands  
Queen Elizabeth Hospital, Hong Kong  
Ragon Institute of MGH, MIT and Harvard, Boston, USA  
Ramathibodi Hospital, Mahidol University, Bangkok  
Rambam Medical Centre, Haifa, Israel  
Research Institute for Health Science, Chiang Mai, Thailand  
Royal Malaysian Police, Malaysia  
Sanglah Hospital, Bali, Indonesia  
Sanpatong Hospital, Chiang Mai, Thailand  
School of Public Health, University of Minnesota, USA

Siriraj Hospital, Bangkok  
South Riverdale Community Health Centre, Toronto, Canada  
Srinagarind Hospital, Khon Kaen, Thailand  
St Luc Hospital, Centre Hospitalier de l'Université de Montreal (CHUM), Canada  
St. Thomas's Hospital, London, UK  
Tan Tock Seng Hospital, Singapore  
Tel Aviv Sourasky Medical Centre, Israel  
Thai Ministry of Health, Thailand  
Thai Ministry of Public Health/US Centre for Disease Control & Prevention Collaboration (TUC) Bangkok  
Thai Red Cross Society, Thailand  
The United Nations Children's Fund (UNICEF), New York, USA  
Toronto General Research Institute, Toronto, Canada  
TREAT Asia, American Foundation for AIDS Research (amFAR), Bangkok, Thailand  
Tsinghua University  
Uduyana University, Sanglah Hospital, Bali  
UNAIDS, Geneva  
UNAIDS, Vietnam  
Universitas Gadjah Mada, Yogyakarta, Indonesia  
Universitätsklinikum Düsseldorf, Klinik für Gastroenterologie, Hepatologie und Infektiologie-MX- Amb  
Université Laval, Quebec, Canada  
University of Amsterdam and Infectious Disease Cluster, Amsterdam Public Health Service  
University of Bonn, Bonn, Germany  
University of Bristol, UK  
University of British Columbia  
University of California, San Diego  
University of California, San Francisco  
University of Health Sciences, Phnom Penh, Cambodia  
University of Indonesia, Indonesia  
University of Malaya, Malaysia  
University of Malaya Medical Centre, Kuala Lumpur  
University of Maryland, Baltimore, USA  
University of Minnesota, Minneapolis, USA  
University of Missouri, St Louis, USA  
University of Montreal, Canada  
University of Otago Medical School, Canada  
University of Ottawa, Canada  
University of Oxford, UK  
University of Papua New Guinea (UPNG), Port Moresby, Papua New Guinea  
University of Toronto, Canada  
Urban Health Research Initiative, Vancouver, British Columbia, Canada  
USAID, USA  
US Centres for Disease Control (CDC), Vietnam  
Vaccine and Gene Therapy Institute (VGTI) Port St. Lucie, Florida, USA  
VIA LIBRE, Lima, Peru  
Virgen del Rocio University Hospital, Spain

Waikato Hospital, Hamilton NZ  
Wellington Hospital, Wellington NZ  
Western General Hospital, Edinburgh  
Wojewodzki Szpital Zakazny, Warsaw, Poland  
The World Bank  
The World Health Organisation, Geneva  
The World Health Organization, Manila, Philippines  
Viet Nam Administration of HIV/AIDS Control, Vietnam  
Yale University, USA  
Yonsei University, Seoul, Korea  
YRG Centre for AIDS Research and Education, Chennai, India  
Zentrum für Suchtmedizin ZfS, Basel, Switzerland  
Ziekenhuis Oost Limburg, Genk, Belgium  
ZNA Stuivenberg, Antwerp, Belgium

## **PHARMACEUTICAL AND BIOMEDICAL INDUSTRY**

Abbott Australasia Pty Ltd, Sydney  
Boehringer Ingelheim Pty Ltd, Sydney  
Bristol-Myers Squibb Pharmaceuticals, Melbourne  
Calimmune, USA  
CSL Limited, Melbourne  
Gilead Sciences, Foster City, California  
GlaxoSmithKline Australia, Melbourne  
Janssen-Cilag Pty Ltd, Sydney  
Matrix Laboratories, Hyderabad, India  
Merck Sharp and Dohme, Sydney  
Roche Pharmaceuticals  
Roche Products Pty Ltd, Sydney  
SpeedX Pty Ltd, Sydney  
ViiV Healthcare, Sydney

# FUNDING 2012

	AUD\$
<b>NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL (NHMRC) PROGRAM GRANTS</b>	
HIV & HCV vaccines and immunopathogenesis	1,979,206
Sexually transmitted infections - causes, consequences and interventions	1,177,856
Building research capacity for health interventions to improve Aboriginal health (subcontract from University of Sydney)	14,188
<b>PROJECT GRANTS</b>	
A population-based record linkage study of the impact of chlamydia infection on reproductive health in women	165,181
A randomised controlled trial to evaluate the effectiveness and cost-effectiveness of chlamydia testing in general practice	20,252
A randomised trial of rapid point-of-care tests for chlamydia and gonorrhoea infections in remote aboriginal communities	465,913
A randomised trial to control sexually transmitted infections in remote Aboriginal communities	237,994
A randomised trial to determine the safety and efficacy of early vs deferred treatment of HIV	206,790
Evaluation of naturally occurring resistance to Direct Acting Antiviral Drugs (DAAs) in individuals with acute hepatitis C infection	13,518
HCV incidence cohort: 10 year mortality study	27,500
Hepatitis C, prisons and treatment opportunities	209,599
Hepatitis C vaccine preparedness study	233,354
HIV assembly, transport, egress and transfer from infected dendritic cells	86,759
Modelling and economic evaluation of hepatitis C epidemic mitigation strategies in Australia	157,714
Modelling the interaction between sexually transmitted infections and HIV transmission to inform public health policy	194,766
Neisseria gonorrhoeae antimicrobial resistance, detection and propagation	34,363
Social norms regarding HIV/STI risk and risk reduction behaviours among men who have sex with men in Australia	182,660
Viral load, HIV treatment and HIV transmission in serodiscordant male homosexual couples	395,740
<b>PARTNERSHIP GRANTS</b>	
Evaluation of a model for assessment and treatment of hepatitis C virus among injecting drug users in the opiate pharmacotherapy setting (ETHOS)	253,941
<b>CAPACITY BUILDING GRANTS</b>	
From Broome to Berrima: Building Australia-wide research capacity in Indigenous offender health and health care delivery	442,798
<b>CENTRES OF CLINICAL RESEARCH EXCELLENCE</b>	
Aboriginal Health: Blood borne viral and sexually transmitted infections	142,653
<b>EQUIPMENT GRANTS</b>	
Upgrade from BDFACSAria 1 to BDFACSAria II	80,000
<b>FELLOWSHIPS</b>	
Prof. Basil Donovan (Practitioner Fellowship)	106,526
Prof. Greg Dore (Practitioner Fellowship)	106,526
Dr Jason Grebely (Career Development Fellowship)	99,431
Prof. Andrew Grulich (Principal Research Fellowship)	142,949
A/Prof. Rebecca Guy (Postdoctoral Training Fellowship)	36,240
Dr Peter Higgs (Postdoctoral Training Fellowship)	93,834
Dr Fengyi Jin (Postdoctoral Training Fellowship)	93,521
Prof. John Kaldor (Senior Principal Research Fellowship)	161,674
Prof. Anthony Kelleher (Practitioner Fellowship)	106,526
Dr Bette Liu (Postdoctoral Training Fellowship)	82,833
Prof. Lisa Maher (Senior Research Fellowship)	118,157
Dr Anna Olsen (Postdoctoral Training Fellowship)	75,068
Dr Mary Poynten (Postdoctoral Training Fellowship)	71,654
Dr David Templeton (Postdoctoral Training Fellowship)	36,457
Dr Andrew Vallely (Postdoctoral Training Fellowship)	82,391

## POSTGRADUATE SCHOLARSHIPS

Maryam Salehi Alavi	58,928
Paul Clark	55,576
Damian Conway	12,750
Denise Hsu	73,865
Tina Iemma	25,979
Bethany White	13,525

## AUSTRALIAN RESEARCH COUNCIL (ARC)

### DISCOVERY PROJECTS

Understanding spatial trends in HIV/AIDS infections in South Africa and Australia	75,370
---	--------

### LINKAGE PROJECTS

In vivo molecular imaging using engineered affinity reagents and fluorescent laser scanning confocal endomicroscopy	95,634
Sexual health and relationships in young Indigenous people	194,988

### FUTURE FELLOWSHIPS

Prof. Tony Butler	216,630
A/Prof. David Wilson	188,508

## AUSTRALIAN GOVERNMENT

### FEDERAL DEPARTMENT OF HEALTH AND AGEING

Research activities for blood borne virus and sexually transmissible infections	7,002,861
Establishment and maintenance of a trachoma surveillance and reporting unit	214,224
Evaluation of chlamydia pilot in general practice (subcontract with University of Melbourne)	104,065

### NSW OFFICE OF MEDICAL RESEARCH

Institute of Virology infrastructure funding	2,843,194
--	-----------

### NSW MINISTRY OF HEALTH

The eTEST project: An initiative to enhance STI testing in gay men	56,339
Evaluation of a model for assessment and treatment of hepatitis C virus among injecting drug users in the opiate pharmacotherapy setting (ETHOS)	200,000
Mapping of the community networks and groups among men who has sex with men in NSW (The Mapping Study)	10,000
NCHECR HIV surveillance and epidemiology support	125,000
NPA-IECD Aboriginal sexual/reproductive health project	187,846
NPA-IH Aboriginal hepatitis C project	41,238
NSW Aboriginal sexual health and BBV research study (SHIMMER)	112,550
NSW needle and syringe program enhanced data collection	121,000
Reducing impulsive behaviour in repeat violent offenders using a selective serotonin reuptake inhibitor	297,637
Sexual health and relationships in young Indigenous People	20,500

### OTHER STATE DEPARTMENTS

Australia-Canada-India Chlamydia Research Alliance (Queensland Department of Employment, Economic Development and Innovation)	35,000
HIV seroconversion and PASH studies (Victoria Health)	150,000
Sexual health and relationships in young Indigenous people (ACT Health)	2,000
Sexual health and relationships in young Indigenous people (Queensland Health)	50,000
Sexual health and relationships in young Indigenous people (Tasmania Health & Human Services)	3,000
Sexual health and relationships in young Indigenous people (Victoria Health)	31,000
Sexual health and relationships in young Indigenous people (Western Australia Health)	3,000
Study of risk and HIV among men who have sex with men in Western Australia (Western Australia Health)	15,390



## **NATIONAL INSTITUTES OF HEALTH, USA**

Asia Pacific HIV research collaboration: cancer studies (subcontract with American Foundation for AIDS Research)	20,725
Asia Pacific HIV research collaboration: tuberculosis studies (subcontract with American Foundation for AIDS Research)	38,538
Eco-pathogenomics of chlamydial reproductive tract infection (subcontract with University of Maryland)	29,534
International collaborative of prospective studies of HIV and Hepatitis in IDU (subcontract with University of California)	29,036
INSIGHT - Leadership (subcontract with University of Minnesota)	308,190
INSIGHT - FLU 002 & FLU 003 (subcontract with University of Minnesota)	299,805
STALWART study (subcontract with University of Minnesota)	8,843
START study (subcontract with University of Minnesota)	854,821
TREAT Asia HIV Observational Database (subcontract with American Foundation for AIDS Research)	248,251
TREAT Asia pediatric HIV observational database (TApHOD) (subcontract with American Foundation for AIDS Research)	185,500
TREAT Asia studies to evaluate resistance (TASER) (subcontract with American Foundation for AIDS Research)	54,715
Treatment of recently acquired hepatitis C virus infection (ATAHC 2)	350,252

## **OTHER GRANTS AND CONTRACTS**

### **AUSTRALIAN**

A prospective cohort study of hepatitis C treatment delivery in primary care settings (Australian Society for HIV Medicine)	34,235
Epidemiology, prevention and management of liver cancer in NSW: towards a strategic partnership (Cancer Council NSW/University of Sydney)	50,000
Evaluation of improving sexual health in Aboriginal and Torres Strait Islander youth demonstration projects (Australian Institute of Health and Welfare)	13,018
Identifying predisposing factors for, and the consequences of, common and emerging infectious diseases in a large prospective cohort study of adults (Ramaciotti Foundation)	74,688
In vivo molecular imaging using engineered affinity reagents and fluorescent laser scanning confocal endomicroscopy (MedImmune Limited)	94,268
Inhibition of Dynamin ii (dynii) as a HIV therapeutic and microbicide strategy (Australian Centre for HIV and Hepatitis Virology Research)	122,733
Monitoring transfusion transmissible infections among blood donors (Australian Red Cross Society)	23,376
Papua New Guinea-Australia HIV & AIDS program (AusAID/JTA International Pty Ltd)	9,750
Qualitative longitudinal study to investigate masculinity sexuality and agency among male youth in PNG (AusAID/JTA International Pty Ltd)	127,050
Support for clinical and epidemiological HIV research capacity in Indonesia (AusAID/Australian Society for HIV Medicine)	484,032

### **INTERNATIONAL**

A randomised open-label study of second-line combination ART (American Foundation for AIDS Research, USA)	100,939
ENCORE: Evaluation of novel concepts in optimization of antiretroviral efficacy (Bill and Melinda Gates Foundation, USA)	3,106,310
Evaluation of HIV epidemics and programs in Asia (World Bank, USA)	286,651

### **PHARMACEUTICAL INDUSTRY**

Abbott Australasia Pty Ltd	140,000
CSL Limited	47,415
Gilead Science Pty Ltd	6,690
Janssen-Cilag Pty Ltd	18,255
Merck Sharp & Dohme	573,786
Tibotec Pharmaceuticals Ltd via Quintiles Pty Ltd	10,420

**28,525,952**

## PEER-REVIEWED

### A

Aandahl RZ, Reyes JF, Sisson SA, Tanaka MM. A model-based Bayesian estimation of the rate of evolution of VNTR loci in *Mycobacterium tuberculosis*. *PLoS Computational Biology* 2012;8(6):e1002573

Achhra AC, Amin J, Hoy J, Tanuma J, Sirisanthana T, Nolan D, Merati T, Giles M on behalf of TAHOD and AHOD. Differences in lipid measurements by antiretroviral regimen exposure in cohorts from Asia and Australia. *AIDS Res Treat* 2012;2012:246280.

Achhra AC, Amin J, Law MG, Grulich AE, Yeung J, Kelleher AD, Cooper DA, the Health in Men study group. Changes in metabolic, inflammatory and coagulation biomarkers after HIV seroconversion – the Health in Men (HIM) Biomarker sub-study. *Antiviral Therapy* 2012;10:3851/IMP2434.

Achhra AC, Amin J, Sabin C, Chu H, Dunn D, Kuller LH, Kovacs JA, Cooper DA, Emery S, Law MG for the INSIGHT ESPRIT and SMART study groups. Reclassification of risk of death with the knowledge of D-dimer in a cohort of treated HIV-infected individuals. *AIDS* 2012;26:1707-1717.

Achhra AC, Amin J. Race and CD4+ T-cell count in HIV prognosis and treatment. *Future Virology* 2012;7(2):193-203.

Aggarwal A, Iemma TL, Shih I, Newsome TP, McAllery S, Cunningham AL, Turville SG. Mobilization of HIV spread by diaphanous 2 dependent filopodia in infected dendritic cells. *PLoS Pathog* 2012;8(6):e1002762.

Ahlenstiel CL, Lim HG, Cooper DA, Ishida

T, Kelleher AD, Suzuki K. Direct evidence of nuclear Argonaute distribution during transcriptional silencing links the actin cytoskeleton to nuclear RNAi machinery in human cells. *Nucleic Acids Research* 2012;40:1579-1595.

Aitken CK, Kerr T, Hickman M, Stoové M, Higgs P, Dietze PM. A cross sectional study of emergency department visits by people who inject drugs. *Emerg Med* 2012;201170.

Alavi M, Grebely J, Matthews GV, Petoumenos K, Yeung B, Day C, , Lloyd AR, Van Beek I, Kaldor JM, Hellard M, Dore GJ, Haber PS on behalf of the ATAC Study Group. Effect of pegylated interferon-alpha-2a treatment on mental health during recent hepatitis C virus infection. *J Gastroenterol Hepatol* 2012;27(5):957-65.

Ali H, Donovan B, Liu B, Hocking J, Agius P, Ward J, Bourne C, Kaldor JM, Guy RJ. Chlamydia prevention indicators for Australia: review of the evidence for New South Wales. *Sex Health* 2012;9:399-406

Ali H, Guy RJ, Fairley CK, Wand H, Chen MY, Dickson B, O'Connor CC, Marshall L, Grulich AE, Kaldor JM, Hellard ME, Donovan B. Understanding trends in genital *Chlamydia trachomatis* can benefit from enhanced surveillance: findings from Australia. *Sex Transm Infect* 2012;88(7):552-7.

Ananworanich J, Gorowara M, Avihingsanon A, Kerr SJ, van Heesch N, Khongpetch C, Uanithirat A, Hill A, Ruxrungtham K, Burger DM on behalf of the HIV-NAT 127 Study Team. Pharmacokinetics of and short-term virologic response to low-dose 400-milligram once-daily raltegravir maintenance therapy. *Antimicrob Agents Chemother* 2012;56:1892-1898.

Avihingsanon A, Matthews GV, Lewin

SR, Marks P, Sasadeusz J, Cooper DA, Bowden S, Locarnini S, Dore GJ, Ruxrungtham K. Assessment of HBV flare in a randomized clinical trial in HIV/HBV coinfecting subjects initiating HBV-active antiretroviral therapy in Thailand. *AIDS Res Ther* 2012;9:6.

Avihingsanon A, van der Lugt J, Singphore U, Gorowara M, Boyd M, Ananworanich J, Phanuphak P, Burger D, Ruxrungtham K. Pharmacokinetics and 48 Week Efficacy of Adjusted Dose Indinavir/Ritonavir in Rifampicin-Treated HIV/Tuberculosis-Coinfected Patients: A Pilot Study. *AIDS Res Hum Retrovir* 2012;28(10):1170-6.

### B

Babiker A, Emery S, Fatkenhauer G, Gordin FM, Grund B, Lundgren JD, Neaton JD, Pett SL, Phillips A, Touloumi G, Vjecha MJ for the INSIGHT START Study Group. Considerations in the rationale, design and methods of the Strategic Timing of Antiretroviral Treatment (START) Study. *Clin Trials* 2012; April [Epub].

Baleriola C, Johal H, Robertson P, Jacka B, Whybin R, Taylor P, Rawlinson WD. Infectious disease screening of blood specimens collected post-mortem provides comparable results to pre-mortem specimens. *Cell Tissue Bank* 2012; 13(2):251-258.

Baleriola C, Tu E, Johal H, Gillis J, Ison MG, Law M, Coghlan P, Rawlinson WD. Organ donor screening using parallel nucleic acid testing allows assessment of transmission risk and assay results in real time. *Transpl Infect Dis* 2012;14(3):278-87.

Becker N, Falster MO, Vajdic CM, de Sanjose S, Martínez-Maza O, Bracci PM, Melbye M, Smedby KE, Engels EA, Turner J, Vineis P, Costantini AS, Holly EA, Spinelli JJ, La Vecchia C,

- Zheng T, Chiu BC, Montella M, Cocco P, Maynadié M, Foretova L, Staines A, Brennan P, Davis S, Severson R, Cerhan JR, Breen EC, Birmann B, Cozen W, Grulich AE, Newton R. Self-reported history of infections and the risk of non-Hodgkin lymphoma: an InterLymph pooled analysis. *Int J Cancer* 2012;131(10):2342-8.
- Boesecke C, Pett SL. Clinical studies with chemokine receptor-5 (CCR5)-inhibitors. *Curr Opin HIV AIDS* 2012;7(5):456-62.
- Bond CE, Umaphathy A, Ramesnes I, Greco SA, Zhao ZZ, Mallitt KA, Buttenshaw RL, Montgomery GW, Leggett BA, Whitehall VLJ. P53 mutation is common in microsatellite stable, BRAF mutant colorectal cancers. *Int J Cancer* 2012;130:1567-1576.
- Bourne C, Zablotska I, Williamson A, Calmette Y, Guy R. Promotion and uptake of a new online partner notification and retesting reminder service for gay men. *Sex Health* 2012;9(4):360-367.
- Bowring AL, Gouillou M, Guy R, Kong FYS, Hocking J, Pirotta M, Heal C, Brett T, Donovan B, Hellard ME, on behalf of the ACCESS Collaboration. Missed opportunities - low levels of chlamydia retesting at Australian general practices. *Sex Transm Infect* 2012;88(5):330-334.
- Boyd M. Dolutegravir--a promising antiretroviral in development. *Lancet Infect Dis* 2012;12(2):90-1.
- Boyd MA, Cooper DA. Optimisation of HIV care and service delivery: doing more with less. *Lancet* 2012;380:1860-1866.
- Boyd M, Mohapi L. STRETCHing HIV service delivery. *Lancet* 2012;380(9845):865-867.
- Breit SN, Carrero JJ, Tsai VW-W, Yagoutifam N, Luo W, Kuffner T, Bauskin AR, Wu L, Jiang L, Baranv P, Heimbürger O, Murikami A-A, Apple FS, Marquis CP, Macla L, Lin S, Sainsbury A, Herzog H, Law M, Stenvinkel P, Brown DA. Macrophage inhibitory cytokine-1 (MIC-1/GDF15) and mortality in end-stage renal disease. *Nephrology Dialysis Transplantation* 2012;27(1):70-75.
- Brockman MA, Chopera DR, Olvera A, Brumme CJ, Sela J, Markle TJ, Martin E, Carlson JM, Le AQ, McGovern R, Cheung PK, Kelleher AD, Jessen H, Markowitz M, Rosenberg E, Frahm N, Sanchez J, Mallal S, John M, Harrigan PR, Heckerman D, Brander C, Walker BD, Brumme Z. Uncommon pathways of immune escape attenuate HIV-1 integrase replication capacity. *J Virol* 2012;86(12):6913-23.
- Brotherton J, Garland S, Donovan B. Genital HPV types in Australia. *Lancet Infect Dis* 2012;12(2):102-3.
- Brotherton JML, Stein AN, Conway EL, Regan DG, Grulich A, Law M, Hocking JS. Human papillomavirus and head and neck cancers: emerging trends and improving survival. *Aust N Z J Public Health* 2012;36(2):195-196.
- Brown DA, Hance KW, Rogers CJ, Sansbury LB, Albert PS, Murphy G, Laiyemo AO, Wang Z, Cross AJ, Schatzkin A, Danta M, Srasuebku P, Amin J, Law M, Breit SN, Lanza E. Serum Macrophage Inhibitory Cytokine-1 (MIC-1/GDF15): A Potential Screening Tool for the Prevention of Colon Cancer? *Cancer Epidemiol Biomarkers Prev* 2012;21(2):337-346.
- Brown G, Ellard J, Mooney-Somers J, Hildebrand J, Langdon T. HIV risk among Australian men travelling overseas: networks and context matter. *Cult Health Sex* 2012;14(6):677-90.
- Bunupuradah T, Puthanakit T, Kosalaraksa P, Kerr SJ, Kariminia A, Hansudewechakul R, Kanjanavanit S, Ngampiyaskul C, Wongsawat J, Luesomboon W, Chuenyam T, Saphonn V, Vun MC, Vibol U, Vannary B, Ruxrungtham K, Ananworanich J on behalf of the PREDICT study group. Poor quality of life among untreated Thai and Cambodian children without severe HIV symptoms. *AIDS Care* 2012;24:30-38.
- Bunupuradah T, Ubolyam S, Hansudewechakul R, Kosalaraksa P, Ngampiyaskul C, Kanjanavanit S, Wongsawat J, Luesomboon W, Pinyakorn S, Kerr S, Ananworanich J, Chomtho S, van der Lugt J, Luplertlop N, Ruxrungtham K, Puthanakit T on behalf of the PREDICT study group. Correlation of selenium and zinc levels to antiretroviral treatment outcomes in Thai HIV-infected children without severe HIV symptoms. *Eur J Clin Nutr* 2012;66(8):900-5.
- Carey D, Pett SL, Bloch M, Wand H, MacRae K, Beileiter K, Ray JE, Boyd MA, Emery S, Cooper DA. A randomized study of pharmacokinetics, efficacy and safety of two raltegravir plus atazanavir strategies in ART-treated adults. *J Acquir Immune Defic Syndr* 2012;60:143-149.
- Chakrabarty S, Murray JM. Modelling hepatitis C virus infection and the development of hepatocellular carcinoma. *J Theoretical Biol* 2012;305:24-29.
- Chih S, MacDonald PS, McCrohon JA, Ma D, Moore J, Fenelev MP, Law M, Kovacic JC, Graham RM. Granulocyte colony stimulating factor in chronic angina to stimulate neovascularisation: A placebo controlled crossover trial. *Heart* 2012;98(4):282-290.
- Chow EPF, Iu KI, Fu X, Wilson DP, Zhang L. HIV and sexually transmissible infections among money boys in China: a data synthesis and meta-analysis. *PLoS ONE* 2012;7(11):e48025.
- Chow EP, Wilson DP, Zhang L. Estimating HIV incidence among female partners of bisexual men in China. *Int J Infect Dis* 2012;16(5):653-663.
- Chow EP, Wilson DP, Zhang L. The rate of HIV testing is increasing among men who have sex with men in China. *HIV Med* 2012;13(5):255-63.
- Chow EPF, Wilson DP, Zhang L. Patterns of condom use among men who have sex with men in China: a systematic review and meta-analysis. *AIDS Behav* 2012;16(3):653-63.
- Clark PJ, Thompson AJ. Host genomics and HCV treatment response. *J Gastroenterol Hepatol* 2012;27(2):212-22.
- Clark PJ, Thompson AJ, Vock DM, Kratz LE, Tolun AA, Muir AJ, McHutchison JG, Subramanian M, Millington DM, Kelley RI, Patel K. Hepatitis C virus selectively perturbs the distal cholesterol synthesis pathway in a genotype-specific manner. *Hepatology* 2012;56(1):49-56.
- Clark PJ, Thompson AJ, Zhu Q, Vock DM, Zhu M, Patel K, Harrison SA, Naggie S, Ge D, Tillmann HL, Urban TJ, Shianna K, Fellay J, Goodman Z, Noviello S, Pedicone LD, Afdhal N, Sulkowski M, Albrecht JK, Goldstein DB, McHutchison JG, Muir AJ. The association of genetic variants with hepatic steatosis in patients with genotype 1 chronic hepatitis C infection. *Dig Dis Sci* 2012;57(8):2213-21.
- Clarke A, Kerr S, Honeybrook A, Cooper DA, Avihingsanon A, Duncombe C, Phanuphak P, Ruxrungtham K, Ananworanich J, Kaldor J. Adherence and risk behaviour in patients with HIV

infection receiving antiretroviral therapy in Bangkok. *Open Virol J* 2012;6:23-28.

Conway DP, Healey LM, Rauwendaal E, Templeton DJ, Davies SC. Providing HIV-negative results to low-risk clients by telephone. *Sex Health* 2012;9(2):160-5.

Copeland L, Robertson JR, McKenzie J, Kimber J, Macleod J, Hickman M, De Angelis D. Premature mortality in Scottish drug users: A life history approach. *Scott Med J* 2012;57(1):38-42.

Cordery DV, Martin A, Amin J, Kelleher AD, Emery S, Cooper DA on behalf of the STEAL study group. The influence of HLA supertype on thymidine analogue associated with low peripheral fat in HIV. *AIDS* 2012;26:2337-2344.

Couture MC, Evans JL, San Sothy N, Stein ES, , Sichan K, Maher L, Page K on behalf of the Young Women's Health Study. Correlates of amphetamine-type stimulant use and associations with HIV-related risks among young women engaged in sex work in Phnom Penh, Cambodia. *Drug Alcohol Depend* 2012;120:119-126.

Couture MC, Page K, Stein E, Sansothy N, Sichan K, Kaldor J, Evans J, Maher L, Palefsky J, on behalf of the Young Women's Health Study Collaborative. Cervical human papillomavirus infection among young women engaged in sex work in Phnom Penh, Cambodia: prevalence, genotypes and risk factors. *BMC Infect Dis* 2012;12:166.

Cowie BC, Dore GJ. The perpetual challenge of infectious diseases. *N Engl J Med* 2012;367:89

Crawford DH, Dore GJ, Sievert W, Cheng WS, Weltman M, McCaughan G, Rawlinson W, Marks PS, Yoshihara M, Rizkalla B, Roberts SK. Early on-treatment viral load and baseline METAVIR score: improved prediction of sustained virological response in HCV genotype 1 patients. *Antivir Ther* 2012;17(5):849-54.

Crawford KW, Ripin DH, Levin AD, Campbell JR, Flexner C for the participants of The Conference on Antiretroviral Drug Optimization (Cooper DA collaborator; Emery S member). optimising the manufacture, formulation and dose of antiretroviral drugs for more post-efficient delivery in resource-limited settings: a consensus statement. *Lancet* 2012;12:550-560.

## D -----

DeJesus E, Rockstroh JK, Henry K, Molina JM, Gathe J, Ramanathan S, Wei X, Yale K, Szwarcberg J, White K, Cheng AK, Kearney BP, GS-236-0103 Study Team (Cooper DA – member). Co-formulated elvitegravir, cobicistat, emtricitabine and tenofovir disoproxil fumarate versus ritonavir-boosted atazanavir plus co-formulated emtricitabine and tenofovir disoproxil fumarate for initial treatment of HIV-1 infection: a randomised, double-blind, phase 3, non-inferiority trial. *Lancet* 2012;379:2429-2438.

DeJesus E, Rockstroh JK, Lennox JL, Saag MS, Lazzarin A, Zhao J, Wan H, Rodgers AJ, Walker ML, Miller M, DiNubile MJ, Nguyen B-Y, Teppler H, Leavitt R, Sklar P for the STARTMRK Investigators (Cooper DA – member). Efficacy of raltegravir versus efavirenz when combined with tenofovir/emtricitabine in treatment-naïve HIV-1-infected patients: Week-192 overall and subgroup analyses from STARTMRK. *HIV Clin Trials* 2012;13:228-232.

Delva W, Wilson DP, Abu-Raddad L, Gorgens M, Wilson D, Hallett TB, Welte A. Principles of good HIV epidemiology modelling for public health decision-making in all modes of prevention and evaluation. *PLoS Med* 2012;9(7):e1001239.

Donovan B, Guy R. Developments in research for STI prevention in Peru. *Lancet* 2012;379(9821):1081-2.

Dore GJ. The changing therapeutic landscape for hepatitis C. *Med J Aust* 2012;196(10):629-32.

Down I, Wilson DP, McCann PD, Gray R, Hoare A, Bradley J, Donovan B, Prestage GP. Increasing gay men's testing rates and enhancing partner notification can reduce the incidence of syphilis. *Sex Health* 2012;9(5):472-480.

Dray A, Perez P, Moore D, Dietze P, Bammer G, Jenkinson R, Siokou C, Green R, Hudson SL, Maher L. Are drug detection dogs and mass-media campaigns likely to be effective policy responses to psychostimulant use and related harm? Results from an agent-based simulation model. *Int J Drug Policy* 2012;23:148-153.

Duerr A, Huang Y, Buchbinder S, Coombs RW, Sanchez J, del Rio C, Casapia M, Santiago S, Gilbert P, Corey L, Robertson MN for the Step/HVTN 504 Study Team

(Cooper DA – member). Extended follow-up confirms early vaccine-enhanced risk of HIV acquisition and demonstrates waning effect over time among participants in a randomized trial of recombinant adenovirus HIV vaccine (Step Study) (Cooper DA – member, Step Study Protocol Team). *J Infect Dis* 2012;206:258-266.

Dung TC, Hien NT, Nga PT, Dinh PN, Seale H, MacIntyre R, Maher L, McLaws ML, Phuong NTL, Dwyer D. Use of cloth masks among healthcare workers in hospitals in Hanoi. *Vietnam J Prevent Med* 2012;22(2) (129):104-110.

## E -----

Else L, Jackson A, Puls RL, Hill A, Fahey P, Lin E, Amara A, Siccardi M, Watson V, Tija V, Emery S, Khoo S, Back D, Boffito M. Pharmacokinetics of lamivudine and lamivudine triphosphate after administration of 300mg and 150mg once-daily to healthy volunteers; the ENCORE2 study. *J Antimicrob Chemother* 2012;56:1427-33.

## F -----

Feigin A, Higgs P, Hellard M, Dietze P. The impact of khat use on East African communities in Melbourne: A preliminary investigation. *Drug Alcohol Rev* 2012;31(3):288-93.

Finfer S, Liu B, Chittock DR, Norton R, Myburgh JA, McArthur C, Mitchell I, Foster D, Dhingra V, Henderson WR, Ronco JJ, Bellomo R, Cook D, McDonald E, Dodek P, Hébert PC, Heyland DK, Robinson BG, NICE-SUGAR Study Investigators. Hypoglycemia and risk of death in critically ill patients. *N Engl J Med* 2012;367(12):1108-18.

Flynn JK, Dore GJ, Matthews G, Hellard M, Yeung B, Rawlinson WD, White PA, Kaldor JM, Lloyd AR, Ffrench, R.; on behalf of the ATAHc Study Group. Impaired Hepatitis C Virus (HCV)-Specific Interferon- Responses in Individuals With HIV Who Acquire HCV Infection: Correlation With CD4+ T-Cell Counts. *J Infect Dis* 2012;206(10):1568-1576.

## G -----

Garland SM, Pirotta M, Donovan B. Genital warts are more than an inconvenience! *Public Health* 2012;126(6):546-7.  
Gidding H, Law M, Amin J, Ostapowicz G, Weltman M, Macdonald G, Sasadeusz J, Haber P, George J, Dore G. Hepatitis

C Treatment Outcomes in Australian Clinics. *Med J Aust* 2012;196:633-637.

Goller JL, Ward J, Saunders M, Couzos S, Kaldor JM, Hellard MA, on behalf of the ACCESS Collaboration (Donovan B Principal Investigator). Chlamydia sentinel surveillance in Aboriginal Community Controlled Health Services: higher testing and positivity rates among younger people. *Aust N Z J Public Health* 2012;36(6):577-81

Gotuzzo E, Markowitz M, Ratanasuwan W, Smith G, Prada G, Morales-Ramirez JO, Strohmaier KM, Lu C, Bhanja S, Nguyen BY, Teppler H; Protocol 004 Study Team. Sustained efficacy and safety of raltegravir after 5 years of combination antiretroviral therapy as initial treatment of HIV-1 infection: final results of a randomized, controlled, phase II study. *J Acquir Immune Defic Syndr* 2012;61(1):73-7.

Graham S, Guy R, Donovan B, McManus H, Su J-Y, El-Hayek C, Kwan KSH, Dyda A, Wand HC, Ward JS. Epidemiology of chlamydia and gonorrhoea among Indigenous and non-Indigenous Australians. *Med J Aust* 2012;197:642-6.

Grebely J, Dore GJ. What is killing people with HCV infection? *Sem Liver Dis* 2011;31:331-9.

Grebely J, Hellard M, Appelgate T, Petoumenos K, Yeung B, Feld JJ, Rawlinson W, Lloyd AR, George J, Kaldor JM, Dore GJ, Matthews GV; on behalf of the ATAHC Study Group. Virological responses during treatment for recent hepatitis C virus: Potential benefit for ribavirin use in HCV/HIV co-infection. *AIDS* 2012;26(13):1653-61.

Grebely J, Pham ST, Matthews GV, Petoumenos K, Bull RA, Yeung B, Rawlinson W, Kaldor JM, Lloyd AR, Hellard M, Dore GJ, White PA on behalf of the ATAHC Study Group. Hepatitis C virus reinfection and superinfection among treated and untreated participants with recent infection. *Hepatol* 2012;55(4):1058-1069.

Grebely J, Prins M, Hellard M, Cox AL, Osburn WO, Lauer G, Page K, Lloyd AR, Dore GJ; International Collaboration of Incident HIV and Hepatitis C in Injecting Cohorts (InC3). Hepatitis C virus clearance, reinfection, and persistence, with insights from studies of injecting drug users: towards a vaccine. *Lancet Infect Dis* 2012;12(5):408-14.  
Grebely J, Talwalkar JA. Recognizing

and preventing death from compensated cirrhosis in the community. *Liver Int* 2012;32:2-4 (invited editorial).

Group THMCTaPEW, Barnighausen T, Becker S, Bendavid E, Bershteyn A, Blandford J, Boily M-C, Burns D, Cambiano V, Cohen MS, Cremin I, Delva W, Dye C, Eaton JW, Egger M, Fraser C, Galai N, Garnett G, Ghys PD, Hallett TB, Heaton L, Holmes CB, Hontelez J, Jewell B, Keiser O, Klein D, Lima V, Long E, Lyerla R, Marais C, Meng F, Meyer-Rath G, Miller WC, Muraguri N, Nichols BE, Nigmatulina KR, Over M, Padian N, Phillips A, Pretorius C, Rousseau C, Salomon J, Sangrujee N, Serwadda D, Tanser F, Vesga JF, Vickerman P, Walker D, Wang R, Welte A, White RG, Williams B, Wilson DP, Wilson D, Zaba B. HIV Treatment as Prevention: Models, Data, and Questions toward Evidence-Based Decision-Making. *PLoS medicine* 2012;9(7):e1001259.

Grulich AE, Machalek DA, Poynten IM, Jin F, Fairley CK, Tabrizi SN, Garland S, Templeton DJ, Hillman RJ. Anal cancer screening - Authors' reply. *Lancet Oncol* 2012;13(7):e280.

Guy R, Hocking J, Low N, Ali H, Bauer HM, Walker J, Klausner JD, Donovan B, Kaldor JM. Interventions to increase rescreening for repeat chlamydial infection. *Sex Transm Dis* 2012;39(2):136-46.

Guy R, Hocking JS, Wand HC, Stott S, Ali H, Kaldor JM. How effective are short message service reminders at increasing clinic attendance? A meta-analysis and systematic review. *Health Serv Res* 2012;47(2):614-632.

Guy R, Wand H, Holt M, Mao L, Wilson DP, Bourne C, Drummond F, Honnor G, Keen P, Donovan B, Prestage G. High annual syphilis testing rates among gay men in Australia, but insufficient retesting. *Sex Transm Dis* 2012;39(4):268-75.

Guy R, Wand H, Knight V, Read PJ. SMS reminders improve re-screening in women and heterosexual men with chlamydia infection at Sydney Sexual Health Centre: a before-and-after study. *Sex Transm Infect* 2012;39(4):260-267.

Guy R, Ward JS, Smith KS, Su JY, Huang RL, Tangey A, Skov S, Rumbold A, Silver B, Donovan B, Kaldor JM. The impact of sexually transmissible infection programs in remote Aboriginal communities in Australia: a systematic review. *Sex Health* 2012;9(3):205-12.

Guy RJ, Patton GC, Kaldor JM. Internet pornography and adolescent health. *Med J Aust.* 2012;196(9):546-7 (editorial)

## H

Haire B, Kaldor J, Jordens CF. How good is "Good Enough"? The case for varying standards of evidence according to need for new interventions in HIV prevention. *Am J Bioeth* 2012;12(6):21-30

Hajarizadeh B, Grebely J, Dore GJ. Case definitions for acute hepatitis C virus infection: A systematic review. *J Hepatol* 2012;57(6):1349-60.

Hamers RL, Oyomopito R, Kityo C, Phanuphak P, Siwale M, Sungkanuparph S, Conradie F, Kumarasamy N, Botes ME, Sirisanthana T, Abdallah S, Li PCK, Ngorima N, Kantipong P, Osibogun A, Lee CKC, Stevens WS, Kamarulzaman A, Derdelinckx I, Chen YMA, Schuurman R, van Vugt M, Rinke de Wit T on behalf of the PharmAccess African (PASER) and TREAT Asia (TASER) Studies to Evaluate Resistance. Cohort Profile: the PharmAccess African (PASER-M) and the TREAT Asia (TASER-M) monitoring studies to evaluate resistance – HIV drug resistance in sub-Saharan Africa and the Asia-Pacific. *Int J Epidemiol* 2012;41(1):43-54.

Hamlyn E, Ewings FM, Porter K, Cooper DA, Tambussi G, Schechter M, Pedersen C, Okulicz JF, McClure M, Babiker A, Weber J, Fidler S on behalf of the INSIGHT SMART and SPARTAC Investigators. Plasma HIV viral rebound following protocol-indicated cessation of ART commenced in primary and chronic HIV infection. *PLoS One* 2012;7:e43754

Hamlyn E, Hickling S, Porter K, Frater J, Phillips R, Robinson M, Nicola ME, Kaye S, McClure M, Fidler S on behalf of the SPARTAC Investigators (Cooper DA – member). Increased levels of CD4 T-cell activation in individuals with CXCR4 using viruses in primary HIV-1 infection. *AIDS* 2012;26:887-890

Harris M, Treloar C, Maher L. Staying safe from hepatitis C: Engaging with multiple priorities. *Qual Health Res* 2012;22:31-42.

Haskelberg H, Hoy JF, Amin J, Ebeling PR, Emery S, Carr A, STEAL Study Group. Changes in bone turnover and bone loss in HIV-infected patients changing treatment to tenofovir-

emtricitabine or abacavir-lamivudine. *PLoS One* 2012;7(6):e38377.

Hellard M, Jenkinson R, Higgs P, Stooove M, Sacks-Davis R, Gold J, Hickman M, Vickerman P, Martin N. Modeling the utility of antiviral treatment for primary prevention of hepatitis C infection among people who inject drugs in Victoria, Australia. *Med J Aust* 2012;196(10):638–641.

Heymer KJ, Wentzlaff-Eggebert M, Mortimer E, Wilson DP. An economic case for providing free access to antiretroviral therapy for HIV-positive people in South Australia. *Sex Health* 2012;9(3):220-6.

Hill PS, Tynan A, Law G, Millan J, Browne K, Sauk J, Kupul M, Kelly A, Siba P, Kaldor J, Vallely A on behalf of the Male Circumcision Acceptability and Impact Study. A typology of penile cutting in Papua New Guinea: results of a modified Delphi study among sexual health specialists. *AIDS Care* 2012;24:77-86.

Hillman RJ, van Leeuwen MT, Vajdic CM, McHugh L, Prestage GP, Botes LP, Zablotska I, Medley G, Tabrizi SN, Grulich AE, Jin FY. Prevalence and predictors of high-grade anal intraepithelial neoplasia in a community-based sample of homosexual men. *Sex Health* 2012;9(6) 574-579.

Hoare A, Gray RT, Wilson DP. Could implementation of Australia's National Gay Men's Syphilis Action Plan have an indirect effect on the HIV epidemic? *Sex Health* 2012;9(2):144-151.

Holt M, Murphy D, Callander D, Ellard J, Rosengarten M, Kippax S, de Wit JBF. HIV-negative and HIV-positive gay men's attitudes towards antiretroviral-based preventions similar attitudes to pre-exposure prophylaxis (PrEP) but greater scepticism among HIV-negative men about 'treatment as prevention'. *J Int Aids Soc* 2012;15:146-7.

Holt M, Murphy DA, Callander D, Ellard J, Rosengarten M, Kippax SC, de Wit JBF. Willingness to use HIV pre-exposure prophylaxis and the likelihood of decreased condom use are both associated with unprotected anal intercourse and the perceived likelihood of becoming HIV positive among Australian gay and bisexual men. *Sex Transm Infec* 2012;88(4):258-63. Horyniak D, Higgs P, Degenhardt L, Cogger S, Power R, Dietze P. Injecting

drug use and related health behaviours in a small case series of East African migrants in Melbourne: Letter. *Aust N Z J Pub Health* 2012;36(6):586-7.

Hsu DC, Zaunders JJ, Plit M, Leeman C, Ip S, Iampornsin T, Pett SL, Bailey M, Amin J, Ubolyam S, Avihingsanon A, Ananworanich J, Ruxrungtham K, Cooper DA, Kelleher AD. A novel assay detecting recall response to *Mycobacterium tuberculosis*: Comparison with existing assays. *Tuberculosis* 2012;92:321-327.

Islam FM, Wu J, Jansson J, Wilson D. Relative risk of cardiovascular disease among people living with HIV: a systematic review and meta-analysis. *HIV Med* 2012;13(8):453-68.

Islam FM, Wu J, Jansson J, Wilson DP. Relative risk of renal disease among people living with HIV: a systematic review and meta-analysis. *BMC Public Health* 2012;12:234.

Islam M, Topp L, Conigrave KM, van Beek I, Maher L, White A, Rodgers C, Day C. The reliability of sensitive information provided by IDU in a clinical setting: Clinician administered versus audio computer assisted self interviewing (ACASI). *AIDS Care* 2012;24(12):1496-503.

Islam MM, Topp L, Conigrave KM, White A, Reid SE, Grummett S, Haber PS, Day CA. Linkage into specialist hepatitis C treatment services of injecting drug users attending a needle syringe program-based primary healthcare centre. *J Subst Abuse Treat* 2012;43(4):440-5.

Islam MM, Topp L, Day CA, Dawson A, Conigrave KM. Primary healthcare outlets that target injecting drug users: Opportunity to make services accessible and acceptable to the target group. *Int J Drug Policy* 2012;23:103-104 (letter; author's reply).

Islam MM, Topp L, Day CA, Dawson A, Conigrave KM. The accessibility, acceptability, health impact and cost implications of primary healthcare outlets that target injecting drug users: A narrative synthesis of literature. *Int J Drug Policy* 2012;23:94-102.

Iversen J, Topp L, Wand H, Maher L. Individual-level syringe coverage among Needle and Syringe Program attendees in Australia. *Drug Alcohol Depend* 2012;122(3):195-200.

Jansson J, Wilson DP. Projected demographic profile of people living with HIV in Australia: planning for an older generation. *PLoS One* 2012;7(8):e38334.

Jarrin I, Pantazis N, Gill MJ, Geskus R, Perez-Hoyos S, Meyer L, Prins M, Touloumi G, Johnson A, Hamouda O, de Olalla PG, Porter K, del Amo J and CASCADE Collaboration in EuroCoord (Cooper DA – member). Uptake of combination antiretroviral therapy and HIV disease progression according to geographical origin in seroconverters in Europe, Canada and Australia. *Clin Infect Dis* 2012;54:111-118

Jiamsakul A, Kantor R, Li PC, Sirivichayakul S, Sirisanthana T, Kantipong P, Lee CK, Kamarulzaman A, Ratanasuwan W, Ditangco R, Singtoroj T, Sungkanuparph S on behalf of the TREAT Asia Studies to Evaluate Resistance – Monitoring Study (TASER-M). Comparison of predicted susceptibility between genotype and virtual phenotype HIV drug resistance interpretation systems among treatment-naive HIV-infected patients in Asia: TASER-M cohort analysis. *BMC Res Notes* 2012;5(1):582.

Jin F, Grulich AE, Mao L, Zablotska I, O'Dwyer M, Poynten M, Prestage GP. Sexual Partner's Age as a Risk Factor for HIV Seroconversion in a Cohort of HIV-Negative Homosexual Men in Sydney. *AIDS Behav* 2012; December [Epub]

Jin F, Prestage GP, Templeton DJ, Poynten IM, Donovan B, Zablotska I, Kippax SC, Mindel A, Grulich AE. The impact of HIV seroadaptive behaviors on sexually transmissible infections in HIV-negative homosexual men in Sydney, Australia. *Sex Transm Dis* 2012;39(3):191-4.

Kab V, Evans J, Sansothy N, Stein E, Couture MC, Maher L, Page K, on behalf of the Young Women's Study Collaborative. Testing for amphetamine-type stimulant (ATS) use to ascertain validity of self-reported ATS use among young female sex workers in Cambodia. *Addict Sci Clin Prac* 2012;7(1):11.

Kariminia A, Butler T, Jones J, Law M. Increased mortality among Indigenous persons during and after release from prison in New South Wales. *Aust N Z J Pub Health* 2012;36:274-280.

Kelly A, Kupul M, Aeno H, Neo J, Naketrumb R, Fitzgerald L, Hill PS, Kaldor JM, Siba P, Valley A. More than just a cut: A qualitative study of penile practices and their relationship to masculinity, sexuality and contagion and their implications for HIV prevention in Papua New Guinea. *BMC Int Health Hum Rights* 2012;12(1):10.

Kelly A, Kupul M, Aeno H, Neo J, Naketrumb R, Fitzgerald L, Kaldor JM, Siba P, Valley A. Why women object to male circumcision to prevent HIV in a middle prevalence country. *Qual Health Res* 2012;S1:23(2):180-193.

Kelly A, Kupul M, Fitzgerald L, Aeno H, Neo J, Naketrumb R, Siba P, Kaldor JM, Valley A. 'Now we are in a different time; various bad diseases have come'. Understanding men's acceptability of male circumcision for HIV prevention in a moderate prevalence setting. *BMC Pub Health* 2012;12(1):67

Kelly GC, Tanner M, Valley A, Clements A. Malaria elimination: Moving forward with spatial decision support systems. *Trends Parasitol* 2012;28(7):297-304.

Keoshkerian E, Helbig K, Beard M, Saunders J, Seddiki N, Kelleher A, Hampartzoumian T, Zekry A, Lloyd AR. A novel assay for detection of hepatitis C virus-specific effector CD4 + T cells via co-expression of CD25 and CD134. *J Immunol Methods* 2012;375(1-2): 148-158.

Kerr SJ, Avihingsanon A, Putharoen O, Chetchotisakd P, Layton M, Ubolyam S, Ruxrungtham K, Cooper DA, Phanuphak P, Duncombe C. Assessing adherence in Thai patients taking combination antiretroviral therapy. *Int J STD AIDS* 2012;23:160-165

Kinner SA, Streitberg L, Butler T, Levy M. Prisoner and ex-prisoner health - improving access to primary care. *Aust Fam Physician* 2012;41(7):535-7.

Klinklom A, Puthanakit T, Gorowara M, Phasomsap C, Kerr S, Sriheara C, Ananworanich J, Burger D, Ruxrungtham K, Pancharoen C. Low dose of lopinavir/ritonavir achieves adequate pharmacokinetic parameters in HIV-Infected Thai Children. *Antivir Ther* 2012;17:283-289.

Koelsch KK. No significant effect of uridine or pravastatin treatment for HIV lip atrophy in men who have ceased thymidine analogue nucleoside reverse transcriptase inhibitor

therapy: a randomised trial. *HIV Med* 2012;11(8):493-501.

Kosalaraksa P, Bunupuradah T, Vonthanak S, Wiangnon S, Hansudewechakul R, Vibol U, Kanchanawanit S, Ngampiyaskul C, Wongsawat J, Luesomboon W, Lumbiganon P, Sopa B, Apornpong T, Chuenyam T, Cooper DA, Ruxrungtham K, Ananworanich J, Puthanakit T. Prevalence of anemia and underlying iron status in naïve antiretroviral therapy HIV-infected children with moderate immune suppression. *AIDS Res Hum Retroviruses* 2012;(12):1679-86.

Kramski M, Schorcht A, Johnston AP, Lichtfuss GF, Jegaskanda S, De Rose R, Stratov I, Kelleher AD, French MA, Center RJ, Jaworowski A, Kent SJ. Role of monocytes in mediating HIV-specific antibody-dependent cellular cytotoxicity. *J Immunol Methods* 2012;384(1-2):51-61.

Kwan B, Ryder N, Knight V, Kenigsberg A, McNulty A, Read P, Bourne C. Sensitivity of 20-minute voiding intervals in men testing for Chlamydia trachomatis. *Sex Transm Dis* 2012;39(5):405-406.

Kwon JA, Anderson J, Kerr CC, Thein H-H, Zhang L, Iversen J, Dore GJ, Kaldor JM, Law MG, Maher L, Wilson DP. Estimating the cost-effectiveness of needle-syringe programs in Australia. *AIDS* 2012;26(17):2201-2210.

**L**-----

Lam YMP, McBride KL, Amin J, Cordery DV, Kelleher AD, Cooper DA, Koelsch K. Switching virally suppressed, treatment-experienced patients to a raltegravir-containing regimen does not alter levels of HIV-1 DNA. *PLoS ONE* 2012;7:3 e31990

Larney S, Topp L, Indig D, O'Driscoll C, Greenberg D. A cross-sectional survey of prevalence and correlates of suicidal ideation and suicide attempts among prisoners in New South Wales, Australia. *BMC Pub Health* 2012;12:14.

Lea T, Prestage G, Mao LM, Zablotska I, De Wit J, Holt M. Trends in Drug Use among Gay and Bisexual Men in Sydney, Melbourne and Queensland, Australia. *Drug Alc Rev* 2012;31:47.

Ledwaba L, Tavel JA, Khabo P, Maja P, Qin J, Sangweni P, Liu X, Follmann D, Metcalf JA, Orsega S, Baseler B, Neaton JD, Lane HC for Project Phidisa (S Emery member). Pre-ART levels of inflammation and coagulation markers

are strong predictors of death in a South African cohort with advanced HIV disease. *PLoS ONE* 2012;7:e24243.

Lewis D, Newton DC, Guy RJ, Ali H, Chen MY, Fairley CK, Hocking JS. The prevalence of Chlamydia trachomatis infection in Australia: a systematic review and meta-analysis. *BMC Infect Dis* 2012;12(1):113.

Lim MS, Goller JL, Guy R, Gold J, Stoove M, Hocking JS, Fairley CK, Henning D, McNamee K, Owen L, Sheehan P, Hellard ME. Correlates of Chlamydia trachomatis infection in a primary care sentinel surveillance network. *Sex Health* 2012;9(3):247-53.

Lim PL, Zhou J, Ditangco RA, Law MG, Sirisanthana T, Kumarasamy N, Chen YMA, Phanuphak P, Lee KKC, Saphonn V, Oka S, Zhang F, Choi JY, Pujari S, Kamarulzaman A, Li PCK, Merati T, Yunihastuti E, Messerschmidt L, Sungkanuparph S and the TREAT Asia HIV Observational Database. Failure to prescribe pneumocystis prophylaxis is associated with increased mortality, even in the cART era: results from the TREAT Asia HIV Observational Database. *J Int AIDS Soc* 2012;15:1.

Liu B, Donovan B, Hocking JS, Knox J, Silver B, Guy R. Improving adherence to guidelines for the diagnosis and management of pelvic inflammatory disease: a systematic review. *Infec Dis Obst Gyn* 2012;2012:325108.

Liu B, Donovan B, Parker J, Guy R, Hocking J, Kaldor JM, Wand H, Jorm L. Increasing chlamydia diagnoses but little change in hospitalisations for ectopic pregnancy and infertility among women in New South Wales from 2001 to 2008. *Sexual Health* 2012;9(4):355-9.

Liu BC, Guthridge S, Li SQ, Markey P, Krause V, McIntyre P, Sullivan E, Ward J, Wood N, Kaldor J. The end of the Australia antigen? An ecological study of the impact of universal newborn hepatitis B vaccination two decades on. *Vaccine* 2012;30(50):7309-14.

Liu B, Guy R, Donovan, Kaldor JM. Chlamydia trachomatis re-infections in a population-based cohort of women. *Sex Transm Infect* 2012;89(1):45-50.

Liu BC, McIntyre P, Kaldor JM, Quinn H, Ridda I, Banks E. Pertussis in older adults: prospective study of risk factors and morbidity. *Clin Infect Dis* 2012;55(11):1450-6.

Lodi S, Meyer L, Kelleher AD, Rosinska M, Ghosn J, Sannes M, Porter K. Immunovirologic Control 24 Months After Interruption of Antiretroviral Therapy Initiated Close to HIV Seroconversion. *Arch Intern Med* 2012;172(16):1252-5.

## M

Machalek DA, Grulich AE, Jin FY, Templeton DJ, Poynten IM. The epidemiology and natural history of anal human papillomavirus infection in men who have sex with men. *Sex Health* 2012;9(6):527-37.

Machalek DA, Poynten M, Jin F, Fairley CK, Farnsworth A, Garland SM, Hillman RJ, Petoumenos K, Roberts J, Tabrizi SN, Templeton DJ, Grulich AE. Anal human papillomavirus infection and associated neoplastic lesions in men who have sex with men: a systematic review and meta-analysis. *Lancet Oncol* 2012;13(5):487-500.

Maher L. Tackling hepatitis C in Australia: the third national strategy. *Lancet Infect Dis* 2012;12(3):172-3.

Maher L, Walsh N. Injecting drug use and HIV. *Curr Opin HIV AIDS* 2012;7(4):317-9.

Maher L, Wand H. Hepatitis C virus transmission in people who inject drugs: Swabs may not be the main culprit. *J Infect Dis* 2012;205(12):1892.

Maher L, Waring E. Beyond simple differences: White collar crime, gender and workforce position. *PHOEBE* 2012;2(1):44-54.

Malacova E, Butler T, Yap L, Grant L, Richards A, Smith AMA, Donovan B. Sexual coercion prior to imprisonment: prevalence, demographic and behavioural correlates. *Int J STD AIDS* 2012;23(8):533-539.

Mallitt KA, Wand H, McDonald A, Wilson DP. Is back-projection methodology still relevant for estimating HIV incidence from National Surveillance Data? *Open AIDS* 2012;6:108-111.

Mallitt KA, Wilson DP, McDonald A, Wand H. HIV incidence trends vary between jurisdictions in Australia: an extended back-projection analysis of men who have sex with men. *Sex Health* 2012;9(2):138-143.

Mayer KH, Bekker LG, Stall R, Grulich AE, Colfax G, Lama JR. Comprehensive clinical care for men who have sex with

men: An integrated approach. *Lancet* 2012;380(9839):378-87.

McManus H, O'Connor CC, Boyd M, Broom J, Russell D, Watson K, Roth N, Read PJ, Petoumenos K, Law M on Behalf of the Australian HIV Observational Database (AHOD). Long-Term survival in HIV positive patients with up to 15 years antiretroviral therapy. *PLoS One* 2012;7(11):e48839.

Morris BJ, Wodak AD, Mindel A, Schrieber L, Duggan KA, Dilley A, Willcourt RJ, Lowy M, Cooper DA, Lumbers ER, Russell CT, Leeder SR. Infant male circumcision: An evidence-based policy statement. *Open J Prev Med* 2012;2:79-92

Morris BJ, Wodak AD, Mindel A, Schrieber L, Duggan KA, Dilley A, Willcourt RJ, Lowy M, Cooper DA. The 2010 Royal Australasian College of Physicians' policy statement 'Circumcision of infant males' is not evidence based. *Intern Med J* 2012;42:822-828

Morris BJ, Wodak AD, Mindel A, Schrieber L, Duggan KA, Dilley A, Willcourt RJ, Lowy M, Cooper DA. *Intern Med J* 2012 (Reply);42:1279-1280

Mossenson A, Algie K, Olding M, Garton L, Reeve C. 'Yes wee can' - a nurse-driven asymptomatic screening program for chlamydia and gonorrhoea in a remote emergency department. *Sex Health* 2012;9(2):194-5.

Mota T, Murray JM, Center R, Purcell D, McCaw J. Application of a case-control study design to investigate genotypic signatures of HIV-1 transmission. *Retrovirology* 2012;9:54.

Muessig KE, Smith MK, Powers KA, Lo YR, Burns DN, Grulich AE, Phillips AN, Cohen MS. Does ART prevent HIV transmission among MSM? *AIDS* 2012;26(18):2267-73.

Murray JM, McBride K, Gelgor L, Boesecke C, Bailey M, Mische C, Amin J, Baker D, Finlayson RJ, Bloch MT, Suzuki K, Zaunders JJ, Emery S, Cooper DA, Koelsch KK, Kelleher AD on behalf of the PINT Study Team. Integrated HIV DNA accumulates prior to treatment while episomal HIV DNA records ongoing transmission afterwards. *AIDS* 2012;26(5):543-50.

Myburgh JA, Finfer S, Bellomo R, Billot L, Cass A, Gattas D, Glass P, Lipman J, Liu B, McArthur C, McGuinness S,

Rajbhandari D, Taylor CB, Webb SA; CHEST Investigators; Australian and New Zealand Intensive Care Society Clinical Trials Group. Hydroxyethyl Starch or Saline for Fluid Resuscitation in Intensive Care. *N Engl J Med* 2012;367(20):1901-11.

## N

Nair-Shalliker V, Smith DP, Egger S, Hughes AM, Kaldor JM, Clements M, Krickler A, Armstrong BK. Sun exposure may increase risk of prostate cancer in the high UV environment of New South Wales, Australia: A case-control study. *Int J Cancer* 2012; 131(5):E726-32

Nasr N, Maddocks S, Turville SG, Harman AN, Woolger N, Helbig KJ, Wilkinson J, Bye CR, Wright TK, Rambukwelle D, Donaghy H, Beard MR, Cunningham AL. HIV-1 infection of human macrophages directly induces viperin which inhibits viral production. *Blood* 2012;120(4):778-88.

Nieters A, Conde L, Slager SL, Brooks-Wilson A, Morton L, Skibola DR, Novak AJ, Riby J, Ansell SM, Halperin E, Shanafelt TD, Agana L, Wang AH, De Roos AJ, Severson RK, Cozen W, Spinelli J, Butterbach K, Becker N, de Sanjose S, Benavente Y, Cocco P, Staines A, Maynadié M, Foretova L, Boffetta P, Brennan P, Lan Q, Zhang Y, Zheng T, Purdue M, Armstrong B, Krickler A, Vajdic CM, Grulich A, Smith MT, Bracci PM, Chanock SJ, Hartge P, Cerhan JR, Wang SS, Rothman N, Skibola CF. PRRC2A and BCL2L11 gene variants influence risk of non-Hodgkin lymphoma: results from the InterLymph consortium. *Blood* 2012;120(23):4645-8.

## O

Oliver BG, Elliott JH, Price P, Phillips M, Cooper DA, French MA. Tuberculosis after commencing antiretroviral therapy for HIV infection is associated with elevated CXCL9 and CXCL10 responses to Mycobacterium tuberculosis antigens. *J Acquir Immune Defic Syndr* 2012;61(3):287-292.

Oliver BG, Price P, Wand H, French MA. Increased plasma CXCL10 may be a marker of increased risk of immune restoration disease associated with non-viral pathogens. *JAIDS* 2012;59(3):e47-e49.

Olsen A, Banwell C, Dance P, Maher L. Positive health beliefs and behaviours in the midst of difficult lives: Women who inject drugs. *Int J Drug Policy* 2012;23(4):312-8.



## P-----

Pantazis N, Morrison C, Amornkul PN, Lewden C, Salata RA, Minga A, Chipato T, Jaffe H, Lakhi S, Karita E, Porter K, Meyer L, Touloumi G for the CASCADE Collaboration in EuroCoord and ANRS 1220 Primo-CI Study Group (Cooper DA – member). Differences in HIV natural history among African and non-African seroconverters in Europe and seroconverters in sub-Saharan Africa. *PLoS One* 2012;7:e32369

Park JN, White B, Bates A, Enriquez J, Liao L, Maher L. Motivators and barriers influencing willingness to participate in candidate HCV vaccine trials: perspectives of people who inject drugs. *Drug Alcohol Depend* 2012;123(1-3):35-40.

Pattullo V, Thein HH, Heathcote EJ, Guindi M. Combining semiquantitative measures of fibrosis and qualitative features of parenchymal remodelling to identify fibrosis regression in hepatitis C: A multiple biopsy study. *Histopathol* 2012;61(3):473-87.

Pedrana A, Hellard M, Guy R, El-Hayek C, Gouillou M, Asselin J, Batrouney C, Nguyen P, Stoové M. Stop the Drama Downunder: A Social Marketing Campaign Increases HIV/Sexually Transmitted Infection Knowledge and Testing in Australian Gay Men. *Sex Transm Dis* 2012;39(8):651-8.

Pedrana AE, Hellard ME, Guy R, Wilson K, Stoové M. The Difference in Self-Reported and Biological Measured HIV Prevalence: Implications for HIV Prevention. *AIDS Behav* 2012;16(6):1454-63.

Pedrana AE, Hellard ME, Wilson K, Guy R, Stoové M. High rates of undiagnosed HIV infections in a community sample of gay men in Melbourne, Australia. *J Acquir Immune Defic Syndr* 2012;59:94-99. Perez P, Dray A, Moore D, Dietze P, Bammer G, Jenkinson R, Siokou C, Green R, Hudson SL, Maher L. SimAmph: An agent-based simulation model for exploring the use of psychostimulants and related harm among young Australians. *Int J Drug Policy* 2012;23:62-71.

Petoumenos K, van Leuwen MT, Vajdic CM, Woolley I, Chuah J, Templeton DJ, Grulich AE, Law MG on behalf of the Australian HIV Observational Database (Cooper DA – contributor). Cancer, immunodeficiency and antiretroviral treatment: results from the Australian

Observational Database (AHOD). *HIV Med* 2012;14:77-84.

Petoumenos K, Worm SW, Fontas E, Weber R, De Wit S, Bruyand M, Reiss P, El-Sadr W, D'Arminio Monforte A, Friis-Moller N, Lundgren JD, Law M and on behalf of the D:A:D Study Group. Predicting the short-term risk of diabetes in HIV-positive patients: the Data Collection on Adverse Events of Anti-HIV Drug (D:A:D) Study. *J Int AIDS Soc* 2012;15:17426.

Petoumenos K, Worm SW. HIV infection, ageing and cardiovascular disease: Epidemiology and Prevention. Invited review paper. *Sex Health* 2012;S1:8(4):465-473.

Pham QD, Nguyen TV, Hoang CQ, Cao V, Khuu NV, Huong TTP, Mai AH, Tran HN, Wilson DP, Zhang L. Prevalence of HIV/STIs and associated factors among men who have sex with men in An Giang, Vietnam. *Sex Transm Dis* 2012;39(10):799-806.

Phanuphak N, Ananworanich J, Teeratakulpisarn N, Jadwattanakul T, Kerr SJ, Chomchey N, Hongchookiat P, Mathajittiphun P, Pinyakorn S, Rungrojrat P, Praihirunyakit P, Gerschenson M, Phanuphak P, Valcour V, Kim JH, Shikuma C on behalf of the SEARCH 003 Study Group. A 72-week randomized study of three first-line antiretroviral regimens: d4T switched to AZT vs. AZT vs. TDF in combination with 3TC and NVP. *Antivir Ther* 2012;17(8):1521-31.

Poynton IM, Jin F, Templeton DJ, Prestage GP, Donovan B, Pawlita M, Fairley CK, Garland S, Grulich AE, Waterboer T. Prevalence, incidence and risk factors for HPV16 seropositivity in homosexual men. *Sex Transm Dis* 2012;39(9):726-32.

Poynten IM, Stein AN, Conway EL, Prestage G, Regan DG, Jin FY, Hocking J, Grulich AE. Geographical clustering of anal cancer incidence in Australia. *Sex Health* 2012;9:509-12.

Poynten IM, Zablotska I, Grulich AE. Considerations regarding antiretroviral chemoprophylaxis in MSM. *Curr Opin HIV AIDS* 2012;7(6):549-56.

Prestage G. The spectre of promiscuity: gay male and bisexual non-monogamies and polyamories. *Cult Health Sex* 2012;14(6):719-21.

Prestage G, Brown G, Keen P. Barriers to HIV testing among Australian gay men.

*Sex Health* 2012;9(5):453-458.

Prestage G, Down IA, Bradley J, McCann PD, Brown G, Jin F, Hurley M. Is optimism enough? Gay men's beliefs about HIV and their perspectives on risk and pleasure. *Sex Transm Dis* 2012;39(3):167-72.

Prestage G, Jin F, Grulich A, de Wit J, Zablotska I. Gay men are less likely to use condoms with casual sex partners they know 'well'. *AIDS Behav* 2012;16(3):664-8.

Purcell D, Cunningham A, Turville S, Tachedjian G, Landay A. Biology of Mucosally Transmitted Sexual Infection-Translating the Basic Science into Novel HIV Intervention: A Workshop Summary. *AIDS Res Hum Retrovir* 2012;28(11):1389-96.

Puthanakit T, Saphonn V, Ananworanich J, Kosalaraksa P, Hansuedeweckakul R, Vibol U, Kerr SJ, Kanjanavanit S, Ngampiyaskul C, Wongsawat J, Luesomboon W, Ngo-Giang-Huong N, Chettra K, Cheunyam T, Suwarnlerk T, Ubolyam S, Shearer WT, Paul R, Mofenson LM, Fox L, Law MG, Cooper DA, Phanuphak P, Vun MC, Ruxrungtham K on behalf of the PREDICT Study Group. Early versus deferred antiretroviral therapy for children older than 1 year infected with HIV (PREDICT): a multicentre, randomised, open-label trial. *Lancet Infect Dis* 2012;12(12):933-941.

## R-----

Ramjee G, Wand H. Population-level impact of hormonal contraception on incidence of HIV infection and pregnancy in women in Durban, South Africa. *Bull World Health Organ* 2012;90:748-755. Read PJ, Donovan B. Clinical aspects of adult syphilis. *Intern Med J* 2012;42(6):614-20.

Read P, Guy R, Wand H, Donovan B, McNulty AM. Unprotected fellatio between female sex workers and their clients in Sydney, Australia. *Sex Transm Infect* 2012;88(8):581-584.

Read PJ, Martin L, McNulty A. Would you self-collect swabs in a unisex toilet? *Sexual Health* 2012;9(4):395-6.

Read PJ, Mandalia S, Khan P, Harrison U, Naftalin C, Gilleece Y, Anderson J, Hawkins DA, Taylor GP, de Ruiter A. When should HAART be initiated in pregnancy to achieve an undetectable HIV viral load by delivery? *AIDS* 2012;26(9):1095-103.

Regan DG. Population benefits of HPV vaccination for boys: a complex equation. *Evid Based Med* 2012;17(4):118-9.

Regan DG. HPV vaccination for boys: a complex equation. *Evid Based Med* 2012;17(4):118-119.

Reyes JF, Chan CS, Tanaka MM. Impact of homoplasy on variable numbers of tandem repeats and spoligotypes in *Mycobacterium tuberculosis*. *Infect Genet Evol* 2012;S1:12(4):811-818.

Richmond RL, Butler TG, Indig D, Wilhelm KA, Archer VA, Wodak AD. The challenges of reducing tobacco use among prisoners. *Drug Alcohol Rev* 2012; 31(5):625-30.

Richters J, Butler T, Schneider K, Yap L, Kirkwood K, Grant L, Richards A, Smith AMA, Donovan B. Consensual sex between men and sexual violence in Australian prisons. *Arch Sex Behav* 2012;41(2):517-524.

Rouwenhorst E, Mallitt KA, Prestage G. Gay Men's Use of Condoms With Casual Partners Depends on the Extent of Their Prior Acquaintance. *AIDS Behav* 2012;16(6):1589-96.

## S

Sacks-Davis R, Horyniak D, Grebely J, Hellard M. Behavioural interventions for preventing hepatitis C infection in people who inject drugs: A global systematic review. *Int J Drug Policy* 2012;23:176-184

Sacks-Davis R, Daraganova G, Aitken C, Higgs P, Tracy L, Bowden S, Jenkinson R, Rolls D, Pattison P, Robins G, Grebely J, Barry A, Hellard M. Hepatitis C Virus Phylogenetic Clustering Is Associated with the Social-Injecting Network in a Cohort of People Who Inject Drugs. *PLoS ONE*. 2012;7(10):e47335.

Sasson SC, Zaunders JJ, Seddiki N, Bailey M, McBride K, Koelsch KK, Merlin KM, Smith DE, Cooper DA, Kelleher AD. Progressive activation of CD127+ 132-recent thymic emigrants into terminally differentiated CD127-132+ T-Cells in HIV-1 infection. *PLoS ONE* 2012;7:2 e31148

Savkovic B, Macpherson JL, Zaunders J, Kelleher AD, Knop AE, Pond S, Evans L, Symonds G, Murray JM. T-lymphocyte perturbation following large-scale apheresis and hematopoietic stem cell transplantation in HIV-infected individuals. *Clin Immunol* 2012;144(2):159-71

Savkovic B, Symonds G, Murray JM. Stochastic model of in-vivo X4 emergence during HIV infection: implications for the CCR5 inhibitor Maraviroc. *PLoS ONE* 2012;7(7):e38755.

Seddiki N, Swaminathan S, Phetsouphanh C, Kelleher AD. miR-155 is differentially expressed in Treg subsets, which may explain expression level differences of miR-155 in HIV-1 infected patients. *Blood* 2012;119(26):6396-7 [Letter].

Shields M, Guy RJ, Jeffreys NJ, Finlayson RJ, Donovan B. A longitudinal evaluation of *Treponema pallidum* PCR testing in early syphilis. *BMC Infect Dis* 2012;12:353.

Silver BJ, Knox J, Smith KS, Ward JS, Boyle J, Guy R, Kaldor J, Rumbold AR. Frequent occurrence of undiagnosed pelvic inflammatory disease in remote communities of central Australia. *Med J Aust* 2012;197(11):647-51

Small W, Krusi A, Wood E, Montaner J, Kerr T. Street-level policing in the Downtown Eastside of Vancouver, Canada, during the 2010 Winter Olympics. *Int J Drug Policy* 2012;23:128-133.

Small W, Moore D, Shoveller J, Wood E, Kerr T. Risk and safety within injection settings: Injection drug users' reasons for attending a supervised injection facility. *Health Risk Soc* 2012;14(4):307-324.

Small W, Wood E, Tobin D, Rikley J, Lapushinsky D, Kerr T. The Injection Support Team: A peer-driven program to address unsafe injecting in a Canadian setting. *Substance Use & Misuse* 2012;47:491-501.

Swaminathan S, Murray DD, Kelleher AD. The role of microRNAs in HIV-1 pathogenesis and therapy. *AIDS* 2012;26(11):1325-34.

Swaminathan S, Suzuki K, Seddiki N, Kaplan W, Cowley MJ, Hood CL, Clancy JL, Murray DD, Mendez C, Glegor L, Anderson B, Roth N, Cooper DA, Kelleher AD. Differential regulation of the Let-7 family of microRNAs in CD4+ TCells alters IL-10 expression. *J Immunol* 2012;188:6238-6246

Swart A, Burns L, Mao L, Grulich AE, Amin J, O'Connell DL, Meagher NS, Randall DA, Degenhardt L, Vajdic CM. The importance of blood-borne viruses in elevated cancer risk among opioid-dependent people: a population-based cohort study. *BMJ Open* 2012;2(5).

## T

Tabrizi SN, Brotherton JM, Kaldor JM, Skinner SR, Cummins E, Liu B, Bateson D, McNamee K, Garefalakis M, Garland SM. Fall in human papillomavirus prevalence following a national vaccination program. *J Infect Dis* 2012;206(11):1645-51

Templeton DJ, Manokaran N, O'Connor CC. Prevalence and predictors of chlamydia co-infection among patients infected with gonorrhoea at a sexual health clinic in Sydney. *Sex Health* 2012;9(4):392-4.

Thein HH, Walter SR, Gidding HF, Amin J, Law MG, George J, Dore GJ. Survival after diagnosis of hepatocellular carcinoma and potential impact of treatment in a hepatitis B or C infected cohort. *Hepatol Res* 2012;42(12):1175-86.

Thein HH, Zhang L, Wand H, Wilson DP. Application of Estimation and Projection Package and Spectrum to the context of Australia's HIV epidemic. *Epidemiol* 2012;2:111.

Tilley DM, Hristov S, Templeton DJ, Sharp NC, O'Connor CC. Cervical cancer screening and abnormalities among women in a residential drug-rehabilitation program. *Aust J Prim Health* 2012;18:266-267.

Tran AD, Shakeshaft AP, Ngo AD, Mallitt KA, Wilson DP, Doran CM, Zhang L. Determinants of antiretroviral therapy initiation and treatment outcomes for people living with HIV in Vietnam. *HIV Clinical Trials*. 2012;14(1):21-33.

Tran AD, Shakeshaft AP, Ngo AD, Zhang L, Doran CM, Wilson DP. Structural barriers to timely initiation of antiretroviral treatment in Vietnam: findings from six outpatient clinics. *PLoS ONE*. 2012;7(12):e51289.

Tynan A, Vallely A, Kelly A, Law G, Milan J, Siba P, Kaldor J, Hills PS; on behalf of the Male Circumcision Acceptability and Impact Study, PNG (MCAIS). Vasectomy as a proxy: extrapolating health system lessons to male circumcision as an HIV prevention strategy in Papua New Guinea. *BMC Health Serv Res*. 2012;4(1):299

## V

Vajdic CM, Mccaughan GW, Grulich AE. Cancer risk after organ transplantation. *JAMA* 2012;307(7):663-663.

Vallely A, Fitzgerald L, Fiya V, Aeno H, Kelly A, Sauk J, Kupul M, Neo J, Millan J, Siba P, Kaldor JM. Intravaginal practices and microbicide acceptability in Papua New Guinea: implications for HIV prevention in a moderate-prevalence setting. *BMC Res Notes* 2012;5(1):613.

Vally H, Hall G, Dyda A, Raupach J, Knope K, Combs B, Desmarchelier P. Epidemiology of Shiga toxin producing *Escherichia coli* in Australia, 2000-2010. *BMC Pub Health* 2012;12:63.

Vickerman P, Grebely J, Dore GJ, Sacks-Davis R, Page K, Thomas DL, Osburn WO, Cox AL, Aitken CK, Hickman M, Hellard M on behalf of the InC<sup>3</sup> Collaborative Group. The more you look the more you find: Effects of hepatitis C virus testing interval on reinfection incidence and clearance and implications for future vaccine study design. *J Infect Dis* 2012; 205:1342-1350.

## W

Walker J, Tabrizi SN, Fairley CK, Chen MY, Bradshaw CS, Twin J, Taylor N, Donovan B, Kaldor JM, McNamee K, Urban E, Walker S, Currie M, Birden H, Bowden F, Gunn J, Pirotta M, Gurrin L, Harindra V, Garland SM, Hocking JS. Chlamydia trachomatis Incidence and Re-Infection among Young Women - Behavioural and Microbiological Characteristics. *PLoS ONE* 2012;7(5):e37778.

Wallace J, Hajarizadeh B, Richmond J, McNally S, Pitts M. Managing chronic hepatitis B - The role of the GP. *Aust Fam Phys* 2012;41(11):893-8.

Walsh N, Maher L. HIV and viral hepatitis C coinfection in people who inject drugs: implications of new direct acting antivirals for hepatitis C virus treatment. *Curr Opin HIV AIDS* 2012;7(4):339-44.

Wand H, Falster K, Wilson D, Law M, Maher L. Disproportionate impact of combination antiretroviral therapy on AIDS incidence in Australia: results from a modified back-projection model. *AIDS Behav* 2012;16(2):360-7.

Wand H, Guy R, Wilson D, Law M, Maher L. High rates of late HIV diagnosis among people who inject drugs compared to men who have sex with men and heterosexual men and women in Australia. *AIDS Behav* 2012;17(1):235-41.

Wand H, Iversen J, Wilson D, Topp L, Maher L. Developing and validating a scoring tool for identifying people

who inject drugs at increased risk of hepatitis C virus infection. *BMJ Open* 2012;2(1):e000387.

Wand H, Lote N, Semos I, Siba P. Investigating the spatial variations of high prevalences of severe malnutrition among children in Papua New Guinea: results from geospatial models. *BMC Res Notes* 2012;5:228.

Wand H, Namarola N, Siba P. Investigating the spatial variations of high prevalence's of severe malnutrition among children in Papua New Guinea. *BMC Res Notes* 2012;5:288.

Wand H, Ramjee G. Analyzing continuous measures in HIV prevention research using semiparametric regression and parametric regression models: How to use data to get the (right) answer? *AIDS Behav* 2012;16(6):1448-1453.

Wand H, Ramjee G. Assessing and evaluating the combined impact of behavioural and biological risk factors for HIV seroconversion. *AIDS Care* 2012;24(9):1155-1162.

Wand H, Ramjee G. The effects of injectable hormonal contraceptives on HIV seroconversion and on sexually transmitted infections. *AIDS* 2012;26(3):375-80.

Wand H, Ramjee G. Population level impact of hormonal contraceptives on incidence of HIV and pregnancy among cohort of women, Durban, South Africa. *Bull World Health Organ* 2012;90:748-755.

Wand H, Ramjee G. Assessing and evaluating the combined impact of behavioural and biological risk factors for HIV seroconversion in a cohort of South African women. *AIDS Care* 2012;24(9):1155-62.

Wand H, Whittaker C, Ramjee G. HIV incidence among non-pregnant women living in selected rural, semi-rural and urban areas in Kwazulu-Natal South Africa. *AIDS Behav* 2012;16(7):2062-71.

Wand HC, Ramjee GA. The relationship between age of coital debut and HIV seroprevalence among women in Durban, South Africa: A cohort study. *BMJ Open* 2012;2(1):000285.

Ward J, Guy R, Huang RL, Knox J, Couzos S, Scrimgeour D, Moore L, Leahy T, Jenny H, Donovan BD, Kaldor JM. Rapid point-of-care tests for HIV and sexually transmissible infection control in remote Australia: can they improve Aboriginal people's and Torres

Strait Islanders' health. *Sex Health* 2012;9(2):109-12.

Waters EK, Hamilton AJ, Smith AMA, Philp DJ, Donovan B, Regan DG. Fixed sized samples for type-specific surveillance of human papillomavirus (HPV) in genital warts. *Sex Health* 2012;10(1):95-96.

Waters EK, Kaldor JM, Hamilton AJ, Smith AMA, Philp DJ, Donovan B, Regan DG. Tracking type specific prevalence of human papillomavirus in cervical pre-cancer: a novel sampling strategy. *BMC Med Res Methodol* 2012;14(1):77.

Whiley DM, Goire N, Lahra MM, Donovan B, Limnios AE, Nissen MD, Sloots TP. The ticking time bomb: escalating antibiotic resistance in *Neisseria gonorrhoeae* is a public health disaster in waiting. *J Antimicrob Chemother* 2012;67(9):2059-61.

White B, Dore GJ, Lloyd A, Rawlinson W, Maher L. Ongoing susceptibility to hepatitis B virus infection among people who inject drugs in Sydney. *Aust N Z J Pub Health* 2012;36(4):351-357.

Wilson DP. HIV Treatment as Prevention: Natural Experiments Highlight Limits of Antiretroviral Treatment as HIV Prevention. *PLoS Med* 2012;9(7):e1001231.

Wilson DP, Islam FM, Wu J, Jansson J. A critical epidemiologic review of cardiovascular disease risk in HIV-infected adults: The importance of the HIV uninfected comparison group, confounding, and competing risks: reply. *HIV Med* 2012;14(3):193-4.

Winston A, Duncombe C, Li PCK, Gill JM, Kerr SJ, Puls RL, Taylor-Robinson SD, Emery S, Cooper DA for the Altair Study Group. Two patterns of cerebral metabolite abnormalities are detected on proton magnetic resonance spectroscopy in HIV-infected subjects commencing antiretroviral therapy. *Neuroradiol* 2012;54:1331-1339

Winston A, Puls R, Kerr S, Duncombe C, Li PCK, Gill JM, Taylor-Robinson SD, Emery S, Cooper DA for the Altair Study Group. Dynamics of cognitive change in HIV-infected individuals commencing three different initial antiretroviral regimens: a randomized, controlled study. *HIV Med* 2012;13:245-251

Worm SW, Kamara DA, Reiss P, Fontas E, De Wit S, El-Sadr W, Monforte AD, Law

M, Phillips A, Ryom L, Dabis F, Weber R, Sabin C, Lundgren JD on behalf of the D:A:D Study Group. Evaluation of HIV protease inhibitor usage and the risk of sudden death or non-haemorrhagic stroke. *J Infect Dis* 2012;205(4):535-539.

Wren L, Parsons MS, Isitman G, Center RJ, Kelleher AD, Stratov I, Bernard NF, Kent SJ. Influence of Cytokines on HIV-Specific Antibody-Dependent Cellular Cytotoxicity Activation Profile of Natural Killer Cells. *PLoS One* 2012;7(6):e38580.

Wren LH, Chung AW, Isitman G, Kelleher AD, Parsons MS, Amin J, Cooper DA, Stratov I, Navis M, Kent SJ. Specific antibody-dependent cellular cytotoxicity responses associated with slow progression of HIV infection. *Immunol* 2012;138(2):116-123.

## Y-----

Yap L, Butler T, Richters J, Malacova E, Wand H, Smith AMA, Grant L, Richards A, Donovan B. Penile implants among prisoners - a cause for concern? *PLoS One* 2012;8(1):e53065.

Yiannoutsos CT, Johnson LF, Bouille A, Musick BS, Gsponer T, Balestre E, Law M, Shepherd BE, Egger M for the International Epidemiologic Databases to Evaluate AIDS (IeDEA) Collaboration. Estimated mortality of adult HIV-infected patients starting treatment with combination antiretroviral therapy. *Sex Transm Infect* 2012;88:i33-i43.

## Z-----

Zablotska I, Holt M, de Wit J, McKechnie M, Mao L, Prestage G. Gay Men Who Are Not Getting Tested for HIV. *AIDS Behav* 2012;16(7):1887-94.

Zablotska IB, Holt M, Prestage G. Changes in gay men's participation in gay community life: implications for HIV surveillance and research. *AIDS Behav* 2012;16(3):669-75.

Zhang L, Chow EPF, Jahn HJ, Kraemer A, Wilson DP. High HIV Prevalence and Risk of Infection among Rural-to-urban Migrants in Various Migration Stages in China: a Systematic Review and Meta-Analysis. *Sex Transm Dis* 2012;40(2):136-47.

Zhang L, Chow EPF, Wilson DP. Distributions and trends in sexual behaviors and HIV incidence among men who have sex with men in China. *BMC Pub Health* 2012;12:546.

Zhang L, Chow EP, Zhang J, Jing J, Wilson DP. Describing the Chinese HIV surveillance system and the influences of political structures and social stigma. *Open AIDS* 2012;6:163-8.

Zhang L, Gray RT, Wilson DP. Modelling the epidemiological impact of scaling up HIV testing and antiretroviral treatment in China. *Sex Health* 2012;9(3):261-71.

Zhang L, Wilson DP. Trends in notifiable infectious diseases in China: implications for surveillance and population health policy. *PLoS One* 2012;7(2):e31076.

Zhang XH, Chow EPF, Wilson DP, Sun XS, Zhao R, Zhang J, Jing J, Zhang L. Prevalence of HIV and syphilis infections among long-distance truck drivers in China: a data synthesis and meta-analysis. *Int J Infect Dis* 2012;17(1):e2-7.

Zhou J, Jaquet A, Bissagnene E, Musick B, Wools-Kaloustian K, Maxwell N, Bouille A, Wehbe F, Masays D, Iriondo-Perez J, Hemingway-Foday J, Law M and the Western Africa, Eastern Africa, Southern Africa, Caribbean and Central and South America, and Asia Pacific regions of the International Epidemiologic Databases to Evaluate AIDS (IeDEA). Short-term risk of anaemia following initiation of combination antiretroviral treatment in HIV-infected patients in countries in sub-Saharan Africa, Asia-Pacific and central and South America. *J Int AIDS Soc* 2012;15:5.

Zhou J, Tanuma J, Chaiwarith R, Lee CKC, Law MG, Kumarasamy N, Phanuphak P, Chen YMA, Kiertiburanakul S, Zhang F, Vonthanak S, Ditangco R, Pujari S, Choi JY, Merati TP, Yunihastuti E, Li PCK, Kamarulzama A, Nguyen VK, Pham TTT, Lim PL. Loss to follow-up in HIV-infected patients from Asia-Pacific Region: Results from TAHOD. *AIDS Res Treatment* 2012;2012:375217.

Zhuang X, Liang Y, Chow EPF, Wang Y, Wilson DP, Zhang L. HIV and HCV prevalence among entrants to methadone maintenance treatment clinics in China: a systematic review and meta-analysis. *BMC Infect Dis* 2012;12(130).

Zhuang X, Wang Y, Chow EP, Liang Y, Wilson DP, Zhang L. Risk factors associated with HIV/HCV infection among entrants in methadone maintenance treatment clinics in China: A systematic review and meta-analysis. *Drug Alcohol Depend* 2012;126(3):286-295.

Zou H, Fairley CK, Guy R, Chen MY. The efficacy of clinic-based interventions

aimed at increasing screening for bacterial sexually transmitted infections among men who have sex with men: a systematic review. *Sex Transm Dis* 2012;39(5):382-7.

Zou H, Fairley CK, Hocking JS, Garland SM, Grulich AE, Chen MY. The prevalence of anal human papillomavirus among young HIV negative men who have sex with men. *BMC Infect Dis* 2012;12:341.

## E-PUBLICATIONS

*These publications have appeared electronically in 2012 in advance of their appearance in print. Publications which have appeared in online-only journals are listed above.*

## B-----

Babiker A, Emery S, Fatkenhauer G, Gordin FM, Grund B, Lundgren JD, Neaton JD, Pett SL, Phillips A, Touloumi G, Vjecha MJ for the INSIGHT START Study Group. Considerations in the rationale, design and methods of the Strategic Timing of Antiretroviral Treatment (START) Study. *Clin Trials* 2012; April [Epub].

Botes LP, Pett S, Carr A, Marriott D, Cooper DA, Matthews G, Carbone S, Kumaradevan N, McHugh L, Hillman RJ. Anal cytological abnormalities are poor predictors of high-grade intraepithelial neoplasia amongst HIV-positive men who have sex with men. *Sex Health* 2012; December [Epub]

Bowring AL, Goller JL, Gouillou M, Harvey C, Bateson D, McNamee K, Stephens A, Wardle R, Read C, Boyle D, Donovan B, Guy R, Hellard MA. Chlamydia testing and retesting patterns at Family Planning Clinics in Australia. *Sex Health* 2012; December [Epub]

Bunupuradah T, Chetchotisakd P, Ananworanich J, Munsakul W, Jirajariyavej S, Kantipong P, Prasithsirikul W, Sungkanuparph S, Bowonwatanuwong C, Klinbuayaem V, Kerr SJ, Jiratchaya Sophonphan J, Mootsikapun P, Auchiang C, Kaew-on P, Chautrakarn S, Ubolyam S, Cooper DA, Phanuphak P, Bhakeechep S, Hirschel B, Ruxrungtham K on behalf of the HIV STAR Study Group. Second-line lopinavir/ritonavir monotherapy in patients failing NNRTI-based regimen was associated with frequent low-level viremia: The HIV STAR randomized

controlled study. *Antivir Ther* 2012; July [Epub]

Butler T, Malacova E, Richters J, Yap L, Grant L, Richards A, Smith AMA, Donovan B. Sexual behaviour and sexual health of Australian prisoners. *Sex Health* 2012; December [Epub]

**D**-----  
Deacon RM, Topp L, Wand H, Day CA, Rodgers C, Haber PS, van Beek I, Maher L. Correlates of Susceptibility to Hepatitis B among People Who Inject Drugs in Sydney, Australia. *J Urban Health* 2012 Jun 9 [Epub]

**G**-----  
Grebely J, Morris MD, Rice TM, Bruneau J, Cox AL, Kim AY, McGovern BH, Shoukry NH, Lauer G, Maher L, Lloyd AR, Hellard M, Prins M, Dore GJ, Page K on behalf of the InC3 Study Group. Cohort Profile: The International Collaboration of Incident HIV and Hepatitis C in Injecting Cohorts (InC3) Study. *Int J Epidemiol* 2012 Nov 30. [Epub]

**H**-----  
Hawke KG, Waddell RG, Gordon DL, Ratcliff RM, Ward PR, Kaldor JM. HIV Non-B Subtype Distribution: Emerging Trends and Risk Factors for Imported and Local Infections Newly Diagnosed in South Australia. *AIDS Res Hum Retroviruses* 2012 Oct 25. [Epub]

Hu H, Harmer C, Anuj S, Wainwright CE, Manos J, Cheney J, Harbour C, Zablotska I, Turnbull L, Whitchurch CB, Grimwood K, Rose B; the ACFBAL study investigators. Type 3 secretion system effector genotype and secretion phenotype of longitudinally collected *Pseudomonas aeruginosa* isolates from young children diagnosed with cystic fibrosis following newborn screening. *Clin Microbiol Infect* 2012; Jan 13 [Epub]

Huang X, Lodi S, Fox Z, Li W, Phillips A, Porter K, Lutsar I, Kelleher A, Li N, Xu X, Wu H, Johnson AM; (On behalf of the Beijing PRIMO cohort study and the CASCADE Collaboration in EuroCoord 1999). Rate of CD4 decline and HIV-RNA change following HIV Seroconversion in men who have sex with men: a comparison between the Beijing PRIMO and CASCADE cohorts. *J Acq Immun Defic Syndr*. 2012; Dec 6 [Epub]

**I**-----  
Islam MM, Shanahan M, Topp L, Conigrave KM, White A, Day CA. The cost of providing primary health-care services from a needle and syringe program: A case study. *Drug Alcohol Rev* 2012; Nov 29 [Epub]

Islam MM, Topp L, Conigrave KM, White A, Haber PS, Day CA. Are primary health care centres that target injecting drug users attracting and serving the clients they are designed for? A case study from Sydney, Australia. *Int J Drug Policy* 2012; Jul 18 [Epub]

Iversen J, Topp L, Wand H, Maher L. Are people who inject performance and image-enhancing drugs an increasing population of Needle and Syringe Program attendees? *Drug Alc Rev* 2012; August 29 [Epub]

**J**-----  
Jin F, Grulich AE, Mao L, Zablotska I, O'Dwyer M, Poynten M, Prestage GP. Sexual Partner's Age as a Risk Factor for HIV Seroconversion in a Cohort of HIV-Negative Homosexual Men in Sydney. *AIDS Behav* 2012; December [Epub]

**K**-----  
Korostil I, Peters G, Cornebise J, Regan D. Adaptive Markov chain Monte Carlo forward simulation for statistical analysis in epidemic modelling of human papillomavirus. *Statistics Med* 2012; Sep 7 [Epub]

**L**-----  
Lee FJ, Amin J, Bloch M, Pett SL, Marriott D, Carr A. Skeletal muscle toxicity associated with raltegravir-based combination anti-retroviral therapy in HIV-infected adult. *J Acquir Immune Defic Syndr* 2012 Dec 28 [Epub]

**M**-----  
Mooney-Somers J, Olsen A, Erick W, Scott R, Akee A, Maher L. Young Indigenous Australians' sexually transmitted infection prevention practices: A community-based participatory research project. *J Community Appl Soc Psychol* 2012; Jan [Epub]

**O**-----  
Olsen A, Banwell C, Dance P. Reinforced Biographies Among Women Living With Hepatitis C. *Qual Health Res* 2012 Dec

20. [Epub ahead of print]

Olsen A, Temple-Smith M, Banwell C. Consideration of gender in diagnosis and management of blood-borne viruses: the case of hepatitis C. *Australian Journal of Primary Health* 2012; May 31 [Epub]

**P**-----  
Pham QD, Wilson DP, Zhang L. A Review of the Extent of HIV Drug Resistance in Vietnam. *J AIDS Clin Res* 2012; S5 [Epub].

Prestage G, Brown G, Down IA, Jin F, Hurley M. "It's Hard to Know What is a Risky or not a Risky Decision": Gay Men's Beliefs About Risk During Sex. *AIDS Behav* 2012 Mar 20 [Epub]

**R**-----  
Ramjee G, Wand H. Impact of hormonal contraceptives on the incidence of HIV infection and pregnancy rates in a cohort of women in Durban, South Africa. *Bull World Health Organ* 2012; July [Epub]

Richmond R, Indig D, Butler T, Wilhelm K, Archer V, Wodak A. A Randomised Controlled Trial of a Smoking Cessation Intervention Conducted among Prisoners. *Addiction* 2012; December [Epub]

**S**-----  
Seddiki N, Phetsouphanh C, Swaminathan S, Xu Y, Rao S, Li J, Sutcliffe EL, Denyer G, Finlayson R, Gelgor L, Cooper DA, Zaunders J, Kelleher AD; The miR-9/Blimp-1/IL-2 axis is differentially regulated in progressive HIV infection. *Eur J Immunol* 2012 Nov 7 [Epub]

**T**-----  
Topp L, Iversen J, Baldry E, Maher L. Housing Instability among People Who Inject Drugs: Results from the Australian Needle and Syringe Program Survey. *J Urban Health* 2012 Jun 26 [Epub]

Treloar C, Hull P, Dore GJ, Grebely J. Knowledge and barriers associated with assessment and treatment for hepatitis C virus infection among people who inject drugs. *Drug Alcohol Rev* 2012 May 21 [Epub]

**W**-----  
Walker J, Walker S, Fairley CK, Bilardi J, Chen MY, Bradshaw CS, Urban E, Pirotta M, Birden H, Donovan B, Kaldor JM, Gunn J, Hocking JS. What do young women think about having a chlamydia

test? Views of women who tested positive compared with women who tested negative. *Sex Health* 2012 Nov 19 [Epub] Wang Y, Naumann U, Wright ST, Warton DI. mvabund - an R package for model-based analysis of multivariate abundance data. *Methods Ecol Evol* 2012; 21 Feb [Epub].

Warton DI, Wright ST, Wang Y. Distance-based multivariate analyses confound location and dispersion effects. *Methods Ecol Evol* 2012; June [Epub]

Watchirs Smith LA, Hillman, R, Ward, J, Whiley D, Causer L, Donovan, B, Kaldor, J, Guy R. Point-of-care tests for the diagnosis of *Neisseria gonorrhoeae* infection; a systematic review of operational and performance characteristic. *Sex Transm Infect* 2012; Oct 23. [Epub]

Wright ST, Petoumenos K, Boyd MA, Carr A, Downing S, O'Connor CC, Grotowski M, Law MG on behalf of the Australian HIV Observational Database study group. Ageing and long-term CD4 cell count trends in HIV-positive patients with 5 years or more combination antiretroviral therapy experience. *HIV Med* 2012; October [Epub]

**Z**-----  
Zablotska IB, Prestage G, de Wit J, Grulich AE, Mao L, Holt M. The informal use of antiretroviral medications for pre-exposure prophylaxis (PrEP) of HIV among gay men in Australia. *J Acquir Immune Defic Syndr* 2012 Nov 26. [Epub]

## NON-PEER REVIEWED

**A**-----  
Ali H, Micallef J, Donovan B. Global epidemiology of HIV infection. In: Kumar B, Gupta S, eds. *Sexually Transmitted Infections*. New Delhi: Elsevier; 2012:44-56.

**C**-----  
Case KK, Ghys PD, Gouws E, Eaton JW, Borquez A, Stover J, Cuchi P, Abu-Raddad LJ, Garnett GP, Hallitt TB, on behalf of the HIV Modelling Consortium (R. Atun BA, N. Bacaer, T. Barnighausen, A. Bershteyn, M.-C. Boily, W. Delva, P. Eckhoff, A. Foss, J. Heijne, D.J. Klein, N. Low, C.M. Lowndes, S. Mishra, C. Pretorius, A. Welte, P. White, B. Williams, D. Wilson, D.P. Wilson, B. Zaba, H. Prudden). Understanding the modes of transmission model of new HIV infection and its use in prevention

planning. *Bulletin of the World Health Organization*. 2012 90:831-8.

Cowling CS, Povovic G, Liu BC, Ward JS, Snelling TL, Kaldor JM, Wilson DP. Australian trachoma surveillance annual report, 2010. *Commun Dis Intell* 2012;36(3):E242-50

Currie B, Iversen J, Maher L. Drug injection trends among participants in the Australian Needle and Syringe Program Survey, 2007-2011. *IDRS Drug Trends Bulletin*, October 2012 (Supplement). Sydney: Kirby Institute, University of New South Wales.

**D**-----  
Donovan B, Dayan L. Syphilis. In: Warrell DA, Cox TM, Firth JD, Török E, editors. *Oxford Textbook of Infectious and Tropical Diseases*. Oxford: Oxford University Press; 2012. p503-14.

Donovan B, Harcourt C, Egger S, Watchirs Smith L, Schneider K, Wand H, Kaldor JM, Chen MY, Fairley CK, Tabrizi S. *The Sex Industry in New South Wales: a Report to the NSW Ministry of Health*. Sydney: Kirby Institute, UNSW, 2012.

**G**-----  
Grebely J, Hajarizadeh B. A review of the book: *HIV and Liver Disease*. *Practical Gastroenterol* 2012;36(7):46-8.

Guy RJ, Ali H, Liu B, Hocking J, Donovan B, Kaldor J. Genital chlamydia infection in young people: a review of the evidence. A report to the NSW Health Department. The Kirby Institute, University of New South Wales, 2012

Guy RJ, Kaldor JM. STI surveillance systems. In: Kumar B, Gupta S, eds. *Sexually Transmitted Infections*. New Delhi: Elsevier; 2012.

**H**-----  
Hull P, Mao L, Rossteuscher K, Prestage G, Zablotska I, de Wit J, Holt M. *Gay Community Periodic Survey: Canberra 2011*. Sydney: National Centre in HIV Social Research, The University of New South Wales; 2012.

**I**-----  
Iversen J, Maher L. *Australia NSP Survey National Data Report 2007-2011*. Sydney: Kirby Institute, University of New South Wales; 2012.

**K**-----  
Kelleher AD, Cooper DA. Acute HIV Infection. In: Volberding P, Greene W, Lange JMA, Gallant JE, Sewankambo N, editors. *SANDE'S HIV/AIDS MEDICINE: Medical Management of AIDS 2013* Elsevier Ltd. Publishers; 2012. pp.77-88

**L**-----  
Lee E, Holt M, Mao L, Wanganeen K, Dinnison S, Williams S, Prestage G, Zablotska I, de Wit J. *Gay Community Periodic Survey: Adelaide 2011*. Sydney: National Centre in HIV Social Research, The University of New South Wales; 2012. Available at <http://nchr.arts.unsw.edu.au/publications/>

**M**-----  
Maher L. Hepatitis C Vaccine Preparedness: An update on behalf of the HITS-c study group. *AIVL Update* 2012;11:9-10.

Maher L, Daly K. Women in the street-level drug economy: Continuity or change? In: Adler PA, Adler P, O'Brien PK, eds. *Drugs and the American Dream: An Anthology*. New York: Wiley Blackwell; 2012:257-265.

**O**-----  
Olsen A. Context and environment: The value of considering lay epidemiology. In: Banwell C, Ulijaszek S, Dixon J eds. *When culture impacts health: Global lessons from Asia and Australasia for effective health*. Philadelphia: Elsevier; 2012.

Oyomopito R. The HIV-1 group M epidemic in the Asia-Pacific. In: Murray JE, ed. *Exposure Therapy: New Developments*. Hauppauge New York: Nova Science Publishers, Inc; 2012.

**P**-----  
Poulos R, McCarthy M, Stern J, Ferson M, Orr K, Dixon J, Murray C, Polis S, Lucey A, Botham S. The Haymarket foundation clinic and South East Sydney Local Health District (SESLHD) homelessness hepatitis program. *Making it Home* 2012;25(6):46-46.

**T**-----  
Topp L. ATS use and risk-taking behaviours. In: Allsop S, Lee N, eds. *Perspectives on amphetamine-type stimulants*. Melbourne: IP Communications; 2012.

## ABOUT THE KIRBY INSTITUTE

The Kirby Institute was launched on 4 April 2011. It was formerly known as the National Centre in HIV Epidemiology and Clinical Research (NCHECR), which was established in 1986 by the Australian Government to fulfil a number of key roles in Australia's fight against HIV/AIDS. The Kirby Institute is affiliated with the Faculty of Medicine, University of New South Wales.

The Kirby Institute's primary functions relate to the co-ordination of national surveillance programs, clinical research and clinical trials. While its original focus was exclusively on HIV/AIDS, the Kirby Institute's work has expanded to encompass hepatitis B and C, and sexually transmissible infections. The Kirby Institute also conducts research into the transmission, prevention and natural history of these infections.

The Kirby Institute's research program has increasingly taken on a regional focus, with major collaborative programs in Thailand and Cambodia. The Kirby Institute conducts research through eleven programs. Dissemination of the Kirby Institute's research output is undertaken through publication in scientific journals and a range of surveillance reports.

This publication was funded by the Australian Government Department of Health and Ageing. The views expressed in this publication do not necessarily represent the position of the Australian Government.

ISSN No. 1441-2640

The Kirby Institute has three locations:  
Director's Unit and the Immunovirology and Pathogenesis Program:  
**405 Liverpool Street, Darlinghurst NSW 2010 Australia**

The Therapeutic Vaccine Research Program; Biostatistics and Databases Program; Sexual Health Program; Aboriginal and Torres Strait Islander Health Program, Justice Health Research Program and the Public Health Interventions Research Group:  
**UNSW Cliffbrook Campus, 45 Beach Street, Coogee NSW 2034**

The HIV Epidemiology and Prevention Program; Viral Hepatitis Epidemiology and Prevention Program; Viral Hepatitis Clinical Research Program; Surveillance and Evaluation Program for Public Health; Administration and Finance:  
**The CFI Building, Corner Boundary and West Streets, Darlinghurst NSW 2010**

Postal address:  
**The CFI Building, Corner Boundary and West Streets, Darlinghurst NSW 2010**

Telephone +61 (2) 9385 0900  
Fax +61 (2) 9385 0920

Web: [www.kirby.unsw.edu.au/](http://www.kirby.unsw.edu.au/)  
Email: [recpt@kirby.unsw.edu.au](mailto:recpt@kirby.unsw.edu.au)

**The Kirby Institute Annual Report 2012**  
Editor: Louisa Wright

