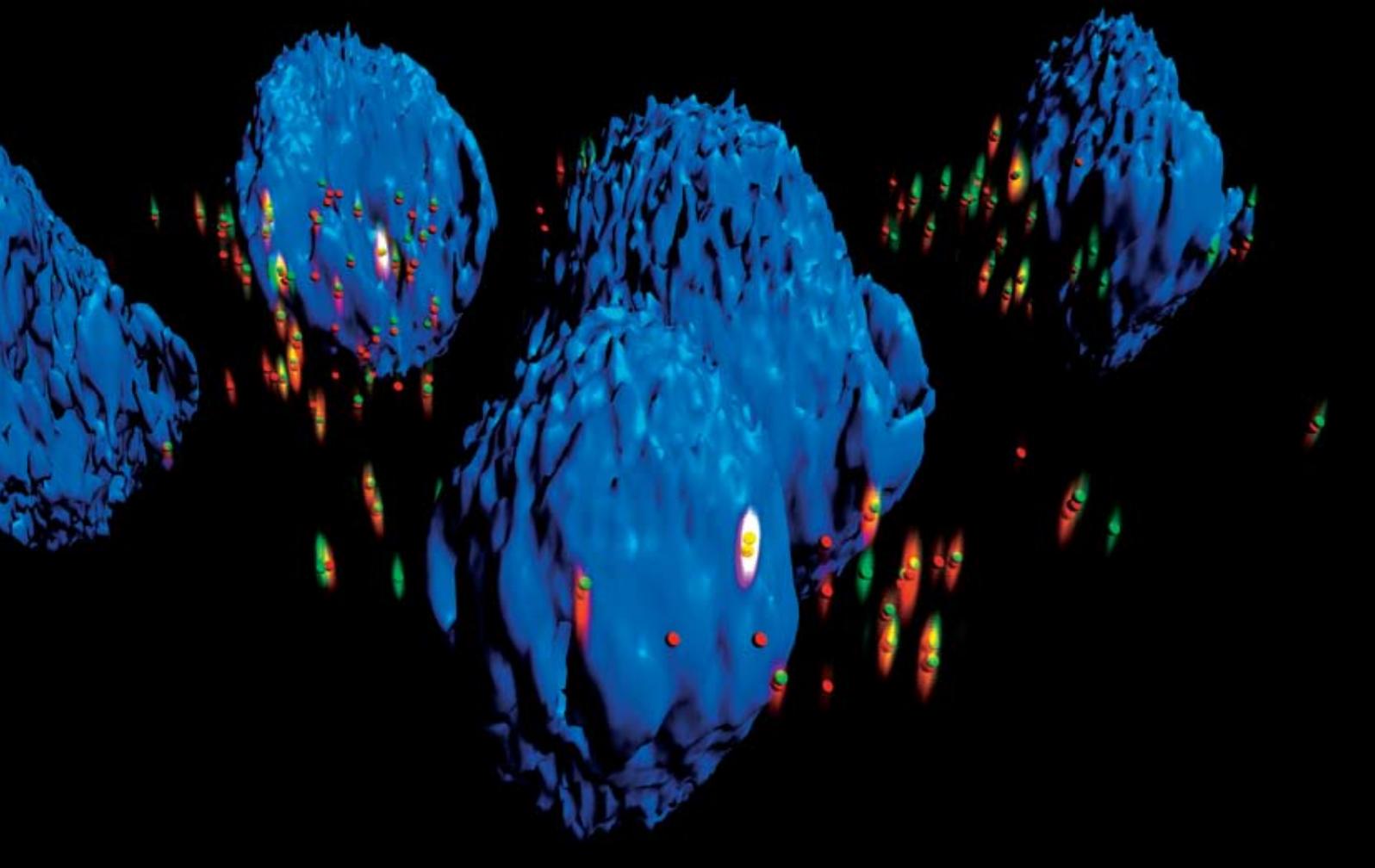


Burnet Institute
Medical Research. Practical Action.

Annual Report

2010



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Director and CEO: Professor Brendan Crabb, BSc(Hons), PhD
Deputy Directors: Associate Professor David Anderson, BSc(Hons), PhD;
Professor Mike Toole, MBBS, BMedSc
Company Secretary: Mr Peter Spiller, BBus, CPA

Cover: Watching HIV infection.

After HIV enters a target cell it will travel to the nucleus from where it can never be removed. This is a picture of human blood cells infected with HIV. The virus particles, each just one ten thousandth of a millimetre in size, and the nucleus of the cells are tagged with red or green fluorescent labels of different colors that can be seen using a fluorescent microscope. The Burnet has the only microscope in Australia that can be used to observe the journey of live HIV inside its target cells, a technique that is shedding new light on the HIV infection process.

Photo credits:

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prevention discovery impact

Developing candidate
vaccines
for infectious diseases and cancers

Discovering factors that
prevent AIDS
developing from HIV infection

Discovering factors influencing
malaria
virulence and immunity

New insights into
drug-resistant TB
its emergence and spread

Understanding factors underlying
alcohol and drug use
in Australia and the Pacific

Providing innovative
disease prevention
programs in post-cyclone Myanmar (Burma)

Developing the first
rapid diagnostic test
for HIV point-of-care management



About Burnet

The Macfarlane Burnet Institute for Medical Research and Public Health (Burnet Institute) is a not-for-profit, unaligned and independent organisation whose purpose is to improve the health of disadvantaged, poor or otherwise vulnerable people throughout the world.

*Specifically, our mission is:
to achieve better health for poor and vulnerable communities in Australia and internationally through research, education and public health.*

Our approach

Our approach to address complex health issues is twofold:

- 1 to generate new knowledge and health intervention tools,
- 2 to apply the best available evidence to community-level public health programs.

The premise of our unique approach to link medical research with public health action is that solutions to many of the major global health problems require comprehensive and innovative responses ranging from novel discoveries, such as the development of new vaccines and diagnostic tests, to the better deployment of existing best-practice health interventions.



As evidence of our combined research and public health approach, the Burnet Institute is formally accredited with both the Australian National Health and Medical Research Council (NHMRC) and the Australian Agency for International Development (AusAID). We are the only organisation in Australia with this dual accreditation.



Major themes and expertise

While we address issues surrounding promoting better health and the treatment and prevention of many diseases, several major health themes underpin our work:

- Infectious diseases
- Sexual and reproductive health
- Young people's health
- Maternal and child health
- Drug and alcohol use
- Immunity and vaccines.

We have particular expertise in specific infectious diseases of global health significance (especially HIV/AIDS, hepatitis viruses, influenza, malaria and emerging infectious diseases), and in understanding the immune responses and developing therapies to these infections and other human diseases including some cancers.

About Burnet

Burnet also focuses on drug and alcohol use, both in addressing risky behaviours associated with transmission of infectious diseases and as major health problems in their own right.

Translating new knowledge into health practice is also a major focus of our extensive work with affected communities in Australia and many countries in our region and beyond. While based in Melbourne, the Burnet Institute has long-term offices in: China, Indonesia, Lao PDR, Mozambique, Myanmar (Burma) and Papua New Guinea; as well as activities in a number of other Asia and Pacific countries. Approximately a third of our staff are based in these overseas offices.

Our staff

Our staff comprises medical scientists, clinical researchers, epidemiologists, public health practitioners, educators and administrators. Burnet Institute has many research students studying for their Masters or PhD degrees and numerous postdoctoral graduates in training.

Our values

We are passionate in our commitment to working and growing together to create a healthier world. We value excellence, innovation and social justice, and share a desire to extend the boundaries of knowledge and understanding.

Named in honour

Burnet Institute is named in honour of Sir Frank Macfarlane Burnet, OM, AK, KBE who received the Nobel Prize for Medicine in 1960.



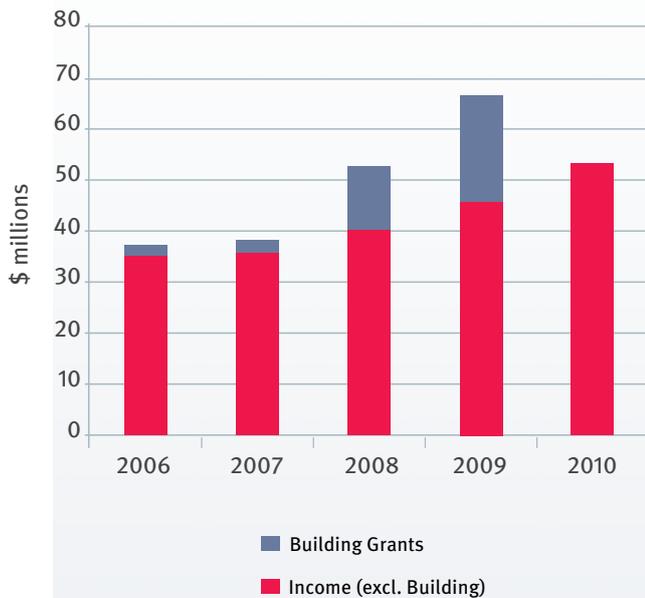
Sir Macfarlane Burnet - 2, 1965

Mark Hingray 2004

2010 Financial Overview

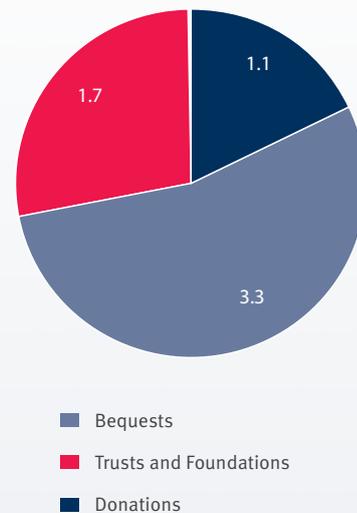
Burnet's income has grown steadily over the past five years to exceed \$53 million in 2010.

Turnover (2006-2010)

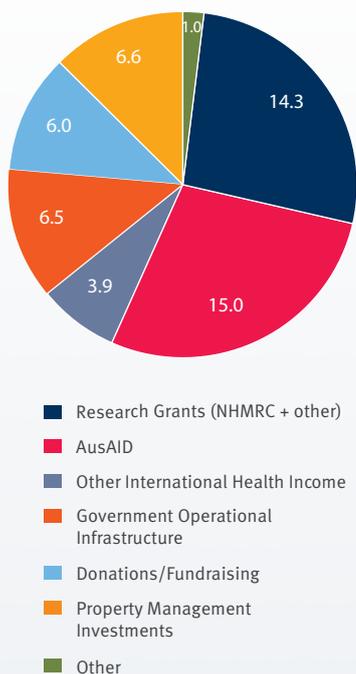


Donations/Fundraising 2010

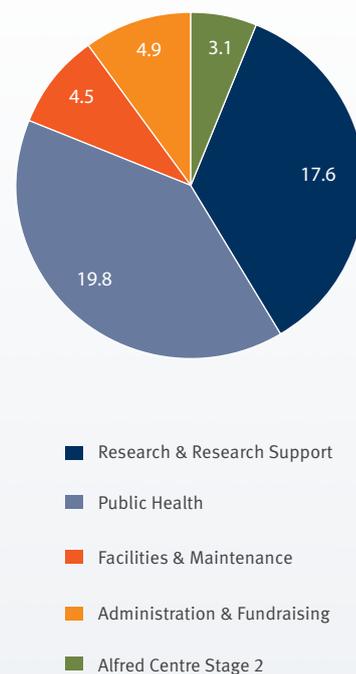
(\$6.0m)



Income 2010 (\$53.2m)



Expenditure 2010 (\$49.9m)





Chairman's Report

This is Burnet's 25th year.

In 1986, the research centre of the Fairfield Infectious Diseases Hospital in Melbourne was renamed the Macfarlane Burnet Centre for Medical Research and created as a separate organisation, under Professor Ian Gust. So much has been achieved in 25 years: Burnet is one of Australia's leading research institutes, with a staff of more than 450 and a budget of more than \$50 million annually – figures unimaginable by Burnet's pioneers 25 short years ago.

I was recently asked to pen 100 words to describe Burnet for the Institute's regular magazine, *IMPACT*. It seemed an unreasonable task to describe Burnet with such brevity, and indeed I failed to meet the 100-word limit. But the few words that follow were the best way I could describe my attitude to the organisation, so I repeat them here:

"Let me just say this on the Institute's 25th birthday: Burnet is an organisation I revere. I could give many reasons for this opinion, but the word limit means I must summarise. I love Burnet because its sole focus is the betterment of humans who, through nothing but happenstance, are marginalised and deprived. No other research institute in Australia makes its focus the world's – including Australia's – poor.

It's impossible to assess how many thousands of lives are being improved, and indeed saved, by Burnet's actions. So I also revere Burnet because it's effective: it gets things done, on the ground, day after day, on a sustainable basis. Although 'unique' is a much over-used word I am at a loss to identify an adjective which better describes this wonderful organisation."

That pretty much sums Burnet up: it is a highly professional, independent, evidence and research-based institute whose sole purpose is to improve the health of disadvantaged people in Australia and throughout the world.

Every year in the Chairman's report there is a description of the year's achievements. 2010 was such an eventful and successful year for Burnet that I'm not going to attempt a description of the year's activities, or to single out particular stellar achievements (of which there were several). I would ask you to browse through the rest of this report to get a sense of the breadth and effectiveness of Burnet's 2010 operations. However, I would like to thank a number of people for their contributions.

I mentioned that 2011 represents a quarter of a century of Burnet, so it's timely that I record the contribution of our past Directors – Professor Ian Gust AO, his successor Professor John Mills and Professor Steve Wesselingh. All contributed enormously to what Burnet is today.

And of course our current Director, Professor Brendan Crabb, who so ably leads the talented group of people who are Burnet's staff. I am inspired by their amazing contribution, which involves care and dedication and

“ I love Burnet because its sole focus is the betterment of humans who, through nothing but happenstance, are marginalised and deprived. No other research institute in Australia makes its focus the world’s – including Australia’s – poor. ”

MR ALASTAIR LUCAS

Chair, Burnet Institute



Burnet's epidemiologists took part in an avian influenza study in Cambodia.



Sir Frank Macfarlane Burnet, OM, AK, KBE presents Professor Ian Gust, AO with a Wellcome award and prize in recognition of his hepatitis A research. Sir Professor Gustav Nossal, AC, Kt cr, CBE spoke at the event, 1982.

sheer hard work, way beyond what would ordinarily be thought reasonable.

I'd also like to thank the members of the Burnet Board, who give their time freely to the Institute. A number of non-executive directors left the Board this year. Ms Denise Allen joined the Burnet Board from the Austin Research Institute (ARI) and has played a significant role as Chair of the Investment Committee. Professor Peter Doherty has served on the Board for nine years, of which five were as Deputy Chairman. His knowledge of science, and his wise counsel during this period, were invaluable. Mr Neil Edwards also joined from ARI and played a pivotal role in the creation of our new ACS2 building. Professor Jim McCluskey served on the board for 13 years – I am especially grateful for the experience and knowledge that he brought to the Board table, and his personal help to me.

Thank you to all of you.

I now welcome to the Board Professor Peter Colman, Head of Structural Biology at WEHI, and Ms Mary Padbury, Chair of leading law firm Blake Dawson. I am also pleased to announce that Professor Mike Toole, who heads Burnet's Centre for International Health, has joined the Board as an Executive Director.

Last, and certainly not least, I want to thank our donors and supporters. It's quite simple – without you there would be no Burnet. I trust that you will read through this Annual Report and feel pride in your part in creating this great organisation. I have often been quoted as saying: if one wants to help the world's poor, there is no better way to do so in Australia than to help Burnet.

MR ALASTAIR LUCAS Chair, Burnet Institute



Director's Report

The past 12 months has been an exciting time for the Institute with a number of strategic initiatives and structural changes implemented, the completion of new laboratory facilities, and a strong performance against our key organisational indicators. A significant portion of time was spent developing our strategic plan, which will guide us through the next five years.

As part of this process, we revisited our mission statement with the Board formally ratifying this, as well as eight key objectives that form the framework of the new plan. Our newly articulated mission statement is *'to achieve better health for poor and vulnerable populations in Australia and internationally through research, education and public health'*. This statement best reflects who we are today and where we are headed. While it has a strong focus on the communities we serve, it provides us with the flexibility to address key health issues across our research and public health continuum.

Of great significance was the completion and occupation of the Alfred Centre Stage 2. This was the culmination of more than five-years planning and construction, involving the hard work and extraordinary commitment of many Burnet staff and board members. I am very grateful to them all for the special opportunity this building provides the organisation. Most importantly, our new state-of-the-art laboratory facilities located on Level 7 of the Alfred Centre have significantly enhanced our capacity and we are already seeing the benefits of expanded research and public health programs.

A number of initiatives were implemented during the year. The Institute developed a new ImmunoMonitoring Facility (IMF), the only NATA-accredited facility of its kind in Australia, providing biotechs access to support for clinical trials of novel vaccines and immunotherapies. The Centre

for Population Health and its collaborating partners have established a Centre for Research Excellence aimed at reducing the health, social and economic problems of injecting drug use in Australia. The Centre, funded through a \$2.5 million National Health and Medical Research Council (NHMRC) grant, will generate new evidence on ways to reduce the disproportionately high level of health problems and social harm in the community resulting from injecting drug use. This was just one of a number of grant and fellowship successes we received from the NHMRC in what was a record year of achievement. Research in HIV, malaria, hepatitis C, immunity and vaccines, drug dependency and health of prison populations were just some of the areas supported at the Institute this year by this highly competitive granting scheme.

In developing our key health themes, we made a number of strategic appointments to the Institute. **Professor Louisa Degenhardt** has been appointed as Principal in Young People's Health. Louisa joins the Centre for Population Health focused on the areas of drug and alcohol use and will also work with the Centre for International Health developing our international adolescent health programs. **Dr James Beeson** and **Dr Freya Fowkes** and their team of researchers and epidemiologists joined our Centre for Immunology, significantly increasing the Institute's expertise focused on the global health issues associated with malaria.

“ Our opportunities to support new initiatives, new star recruits and new equipment have improved significantly through very generous gifts to the Institute. ”

PROFESSOR BRENDAN CRABB,
Director and CEO, Burnet Institute



Burnet's new ImmunoMonitoring Facility provides support for local clinical trials.

James has also taken on a strategic development and leadership role as the new Head of the Centre for Immunology.

In addition to the grant successes mentioned above, our funding position improved significantly through very generous gifts bequeathed to the Institute from three long-term donors; the late Mr Robert Blain, Mrs Georgena Bradshaw, and Mr Jim Beever. These gifts will make a tremendous difference to the work of the Institute and the people we serve. The thoughtfulness of these donors is gratefully acknowledged. We greatly value and appreciate the support all our donors provide to the Institute, the many Trusts and Foundations, AusAID and the NHMRC, all of whom enable us to develop new research and public health initiatives. I thank the Victorian State Government through the Department of Business and Innovation (formerly the Department of Industry, Innovation and Regional Development) for its support of the Institute through the Operational Infrastructure Support Scheme. This scheme makes a significant difference to the Institute, helping fund many of our operating costs. The cost of infrastructure continues to challenge the Institute and all other independent medical research institutes, as costs escalate and the level of support remains static.

During the year we celebrated the **50th anniversary** of Macfarlane Burnet receiving his Nobel Prize for Medicine. Burnet's legacy is considerable; his discovery of immunological tolerance (for which he won the Nobel Prize together with Peter Medawar) and the clonal selection theory, have led to breakthroughs in our understanding of infectious diseases and the immune system and opened up the field of immunology. We also mourned the passing of one of Burnet's colleagues, the highly esteemed Australian scientist **Professor Frank Fenner AC** who made tremendous contributions to global health and the field of virology, especially in relation to

the eradication of small pox. The Institute had a special relationship with Professor Fenner, naming our Fenner Award in his honour. In 2010, this Award was presented to **Associate Professor Margaret Hellard**, Head of the Centre for Population Health for her outstanding contributions to public health. The Institute also recognised the contributions made by **Associate Professor Paul Dietze** who received the Gust-McKenzie medal, awarded to an outstanding mid-career researcher at the Institute.

We welcomed a number of guests to the Institute during the year. Of special significance was the visit of **Michele Sidibé**, Executive Director, UNAIDS. Since his visit, Michele has talked broadly about the Institute and the role we are playing in helping address the HIV epidemic, especially the impact the new rapid CD4 point-of-care test developed at the Institute will play. We were also extremely fortunate to have **Professor Chris Goodnow**, one of Australia's top biological scientists and very much a modern day protégé of Macfarlane Burnet, deliver our 2010 Burnet Oration.

I would like to thank all staff for their contributions over the past 12 months and look forward to a productive 2011. I also thank the members of the Board for generously giving their time and for their wise counsel during the year. A special thanks to our Chairman, **Alastair Lucas**, for his passionate commitment to the organisation and its governance. Finally, a heartfelt thank you to all those who have supported the Institute over the past 12 months and continue to recognise the important contributions the Institute makes to global health.

PROFESSOR BRENDAN CRABB,
Director and CEO, Burnet Institute

In the developing world, mothers and children continue to die or suffer significant illness from preventable causes. Much of this poor health could be alleviated by improved access to quality reproductive and child health information and services including family planning; pregnancy and delivery care; postnatal and newborn care; vaccinations; management of childhood illnesses; and nutritional support.

Burnet Institute has a strong record of working towards better access to health care for mothers and their children by conducting innovative medical and public health research, strengthening service delivery systems, and empowering communities.

Maternal and



Community members meet to discuss health needs.

Child Health

Vilabouly Mother and Child Health Project in Laos

A community health survey conducted by the Burnet Institute in Vilabouly District (the location of the MMG/LXML gold and copper mine) in 2008 revealed a high prevalence of acute and chronic malnutrition among children under five, food insecurity, poor nutritional behaviours, and limited utilisation of maternal and child health services. In response, Burnet Institute Laos is in the third year of a project that aims to improve nutrition and health-seeking behaviour by increasing the capacity of district health personnel to plan and manage primary health care interventions and supporting community nutrition teams to undertake community outreach to promote healthy nutritional behaviours, including exclusive breastfeeding, and improve access to health services for growth monitoring, immunisation, antenatal and postnatal care, family planning, and the distribution of insecticide-impregnated bed nets.

After two years of implementation, the project has seen an increase in exclusive breastfeeding, a more integrated delivery of essential maternal and child health interventions, sustained involvement and support of village authorities, and improved district-level management and planning.

Women's and Children's Health Knowledge Hub

As a partner in the Women's and Children's Health Knowledge Hub, our Centre for International Health (CIH) undertook research to strengthen the evidence for effective health interventions for adolescent girls, pregnant women and children.

This included analysing the barriers and enablers to adolescents accessing sexual and reproductive health information and services in Vanuatu, developing competencies to enable community-level health workers to provide quality services to adolescents, identifying effective interventions to be delivered at the community level to save the lives of mothers and babies in high mortality settings, exploring means for improving women's satisfaction with maternity services by increasing the counselling skills of care providers, and assessing health systems interventions for improving access to maternal and child health services in urban areas of The Philippines. The Hub also co-hosted, with AusAID, a Roundtable on developing a maternal and child health strategy chaired by Bob McMullan, the then Parliamentary Secretary for International Development, and attended by NGOs and health researchers.

Global involvement in hepatitis B control

Recognising Burnet's history of research into hepatitis B in the laboratory and the field, CIH was asked to support World Health Organization (WHO) efforts to promote take-up of the birth dose of hepatitis B vaccine.

Delivering the first dose of hepatitis B vaccine within 24 hours of birth, the timing needed for optimal effectiveness, is a difficult task for national immunisation programs. However, our current feasibility trial in Papua New Guinea has shown that Burnet-trained village health volunteers can work with health centre staff to provide birth dose vaccination using Uniject technology, increasing coverage from 18 to 83 percent.

In December 2010, Burnet's **Chris Morgan** and **Tony Stewart** (CIH) and **David Anderson** (Centre for Virology) participated in a global consultation, hosted by WHO at Burnet, which assembled 30 experts from all regions, to collate best practices and identify future needs to scale-up birth dose vaccination. Independent meeting participants agreed and signed a 'Melbourne Statement' calling for greater use of all available strategies to improve the timely delivery of the birth dose.

Many countries in South Asia and sub-Saharan Africa still need to scale-up birth dose vaccination – offering opportunities to link vaccination with other maternal and newborn care. Burnet's experience in innovative health service enables it to contribute to this effort.

Prevention of congenital syphilis

Syphilis is a bacterial infection with potentially serious outcomes if not treated promptly (including congenital syphilis infection if infection occurs during pregnancy).

Around 22% of neonatal deaths in Papua New Guinea are due to congenital syphilis, and an estimated 500,000 neonatal deaths per year in Sub-Saharan Africa. Many more babies are left with severe birth defects. The detection of active syphilis during antenatal screening is therefore crucial.

Diagnosis of active syphilis requires two separate laboratory tests. Currently available rapid, point-of care (POC) tests cannot discriminate between active infection, and past infection with syphilis or the closely related childhood infection of Yaws, and this has largely prevented their use in antenatal screening programs.

Reducing the severe health impacts of malaria

Worldwide, the major burden of malaria infection occurs in young children, who are at greatest risk of severe disease and death during their first infections with the parasite, and in pregnant women, who are at increased risk due to unique interactions between the malaria parasite and placental tissues, especially during their first pregnancy.

There is a great need for a malaria vaccine, as well as new antimalarials to combat drug resistance. Burnet is addressing this problem from the perspective of both the malaria parasite, and the human host.

Work by **Paul Gilson**, **Brendan Crabb** and their team at Burnet, in collaboration with **Alan Cowman** at WEHI, is focused on the discovery of proteins that are essential for parasite growth in red blood cells. Many malaria proteins prove to be non-essential or redundant, but with support from the Bill and Melinda Gates Foundation and NHMRC, this approach has identified a number of essential proteins that represent promising candidates for future vaccine development, or as targets for new antimalarial drugs.

The recruitment of **James Beeson** and his team from WEHI at the end of 2010 brings to Burnet complementary approaches, involving the detailed analysis of immune responses in children as they develop immunity to malaria, and immune responses in pregnant women. Additionally, studies are identifying compounds that inhibit infection of red blood cells by malaria parasites, an approach that has potential for developing novel antimalarial drugs. These different strategies are highly synergistic, allowing Burnet to apply its expertise in vaccine and drug development to any proteins that are identified as 'hits' using independent approaches.



Syphilis point-of-care test kit.

In 2010, The Alfred Hospital's Infectious Diseases Unit completed a small-scale laboratory evaluation of a new syphilis POC test developed by **Mary Garcia** and **David Anderson** at Burnet, which can distinguish between active syphilis and past infections.

In collaboration with the National Centre for HIV Epidemiology and Clinical Research, Burnet's syphilis test is now undergoing a much larger evaluation in both Australia and Papua New Guinea, in a head-to-head comparison with other syphilis POC tests. This will identify the most suitable POC tests for integration into antenatal screening programs.



HIV and

Peer researchers from our Lao office practising interviews with their colleagues using hand-held computers.

Sexual Health

Sexual health is an important global issue, with sexually transmitted infections (STIs), including HIV impacting on the health of all communities. Across the Institute, Burnet staff and students address sexual health in many ways, including laboratory studies, translational work, operational and epidemiologic studies, clinical trials, capacity building projects, education and training, policy development and supporting treatment programs.

The World Health Organization estimates that more than 33 million people are living with HIV, 2.6 million new infections occur and 1.8 million people die from HIV annually. In response to this, much of the Institute's sexual health work focuses on HIV. Burnet laboratories are undertaking studies investigating how HIV enters cells, how new viruses are formed, how HIV affects the nervous system, possible ways of preventing HIV infection and proposed ways of eradicating HIV from long-lived cells (with the hope of one day finding a cure).

Transferring technology

Consistent with our motto of 'Medical Research. Practical Action.', Burnet scientists strive to translate our laboratory results into the clinic. In the Centre for Virology, the **Crowe Laboratory** is transferring technology for low-cost HIV monitoring assays to build capacity in laboratories in resource limited settings. The **Anderson Laboratory** is collaborating on this work and has also developed a point-of-care diagnostic test for syphilis that will enter large-scale field trials in Australia and Papua New Guinea (PNG) this year (*see page 29*). The **Tachedjian Laboratory** is studying topical microbicides to prevent HIV transmission. In collaboration with Starpharma Pty Ltd, this group has discovered a dendrimer, SPL7013, that in the laboratory has broad antiviral activity against diverse strains of HIV and herpes virus. A gel formulation of SPL7013 (VivaGel®) has been developed for use as a vaginal microbicide and has already undergone early human safety trials.

Many Burnet projects are focused on understanding sexual health-related issues in these populations and supporting communities to improve sexual health. **Dr Claire Ryan** has been seconded from Burnet to lead the HIV and STI laboratory at the Papua New Guinea Institute of Medical Research (PNGIMR). In collaboration with Australia's National Centre for HIV Epidemiology and Clinical Research, Burnet is supporting the PNGIMR in studies including: a national survey of health care workers' knowledge of syphilis testing and diagnosis; studies of the overlapping epidemiology of HSV2 and HIV, and the epidemiology of STIs among women attending antenatal clinics in four provinces; the first HIV drug resistance survey in the PNG highlands; and evaluations of different sample collection tools for STI surveillance.

Sexual networks

The Centre for Population Health (CPH) and Centre for International Health (CIH) are working together on studies of sexual networks, aiming to understand how HIV might be transmitted from those with high-risk behaviours to those who are considered low risk. Analysis of data from 309 people in **Lao PDR** suggests men who report sex with both males and females have high numbers of lifetime partners and low levels of condom use. A sexual network map based on this data shows others in their sexual network may also be at high risk for HIV. Similar data is being collected in an ongoing study in Vietnam.

Our international programs

CIH staff are also contributing to numerous other sexual health-related projects around the world, both through supporting the work of our country programs in China (Tibet), Mozambique, Indonesia, Papua New Guinea, the Pacific, Lao PDR and Myanmar (Burma), and through consultancies across Africa, Asia and the Pacific. The following are some selected examples of this work:

Scaling up HIV in **Indonesia**, Burnet is part of a consortium (led by Training Resources Group from the US) awarded a five-year USAID project in 2010 which focuses on improving organisational performance to scale up HIV interventions that lead to behaviour change among most-at-risk populations. In Bali, Burnet (with AusAID) has supported the Provincial AIDS Commission's Care Support and Treatment Working Group to improve and increase access to voluntary counselling and testing (VCT) and HIV care, support and treatment (CST). Religious and traditional leaders have been motivated to promote VCT

and CST in their communities. Local health staff have been supported to provide quality VCT services at district hospitals across Bali and five district hospitals have started to provide HIV treatment.

In **China**, 2010 saw the conclusion of the six-year *Tibet Health Sector Support Program* (AusAID). This program has contributed to substantially strengthened systems in areas as diverse as HIV testing and counselling, STI testing and treatment, health promotion and outreach, and the first regional prevalence study of HIV and other STIs. Local health authorities now express confidence in addressing risk and vulnerability among nomadic Tibetan populations, taking a settings approach to HIV risk in sex work and industry settings, and conducting screening and referral activities in Lhasa city.

In 2010, Burnet released a review (conducted on behalf of the United Nations Regional Task Force) of policies, resources and services in **fifteen Asian countries**. This aimed to measure progress towards universal access to HIV prevention, treatment and care for people who inject drugs and built on baseline data collected by Burnet in 2006. Over the last year, CIH has also contributed to National Strategic Planning exercises for HIV in the Pacific and numerous reviews, including one of government departments' ability to address HIV among people who inject drugs in East Africa.

For the last year **Burnet Myanmar** has been working with three community partners to implement an antiretroviral therapy program for people with AIDS in Myanmar. **Dr Dan O'Brien**, a member of Burnet's Technical Advisory and Reference Group visited the project in January 2011 to monitor progress and commented: "The level of competence, commitment and dedication of the team is very high and the early outcomes of patients on treatment are good. It was very pleasing to see the aim of providing life-saving ART to those in need... come to fruition and the teams should be proud of their efforts."



The Centre for Population Health also conducts a wide range of HIV and sexual health research, prevention and evaluation projects in Australia. These most notably include the annual surveys of young people at the Big Day Out, the use of mobile phone and internet-based technologies for sexual health promotion, and the evaluation of HIV prevention initiatives targeting men who have sex with men, see following pages for more detail.

Top: Project officer providing home-based care at Wachat Jivitadana Sangha Hospital in Myanmar.

Left: Molecular Biology Skills laboratory workshop conducted at the PNG IMR in July 2010.

Adolescence can bring rapid changes in health due to steeply rising incidence of mental disorders, injury, sexually transmitted infections (STIs) and alcohol and other drug use; risks for later-life health issues such as tobacco use, obesity and physical inactivity also emerge. Prevention of physical and mental disorders and a specific focus upon young people's health needs are very important.

Burnet Institute has a considerable track record of undertaking research and building public health capacity that focuses on young people aged 10–24 years. In 2010, to further develop this area, Professor Louisa Degenhardt was appointed as the Principal for Young People's Health. Following are some of the Institute's initiatives that focus primarily on young people's health.



Young People's Health

Sexual health promotion interventions using communication technologies

Centre for Population Health researchers, led by Margaret Hellard and Mark Stoové, continue to explore the use of communication technologies to deliver sexual health promotion to young people. These technologies are used by most young people, offering novel means of delivering and evaluating health promotion messages. Three key studies have examined the use of SMS to deliver sexual health promotion to young people.

Megan Lim's PhD included a randomised controlled trial of the effect of sexual health SMS and email messages on sexual health knowledge and behaviour. After 12 months, those participants who received messages had significantly higher sexual health knowledge, and of these, those who were female, were significantly more likely to report a recent STI test and discuss sex with their doctor.

Judy Gold undertook two 'scaling up' projects during her PhD. In the first study, more than 2,000 young people received an SMS related to sexual health over a four-month period. Again, sexual health knowledge increased significantly over time, as did the proportion reporting a recent STI test. We then trialled the use of health promotion advertising on mobile phones, efficiently reaching over 7,000 individuals with either safer sex or sun safety health promotion messages. The sexual health related messages generated positive effects.

The huge popularity of social networking sites and their interactive functionality make them ideal for health promotion. In 2009-2010, as part of **Judy Gold** and **Alisa Pedrana's** PhDs, we delivered two interventions using social networking sites (primarily Facebook) – 'The FaceSpace Project' targeting young people and 'Queer As F**k' targeting gay men. Both interventions utilised fictional characters to deliver health promotion messages via online videos and interaction on the social networking sites. 'Queer As F**k' reached more than 1,700 users, and has been continued by a local community organisation.



The development of community-based initiatives to improve young people's health services in Zimbabwe.

Robert Power was a senior investigator on an intervention study targeting adolescent reproductive health in rural Zimbabwe. This multi-method study resulted in the development of community-level initiatives including youth-friendly clinics, nurse training, school-based health promotion and measures to address high-risk environments, such as micro-credit schemes, sports initiatives and permaculture.

Sexual and reproductive health in young people in rural southwest Uganda.

Ann-Maree Nobelius' PhD research (supervised by Robert Power) focused on adolescent out-of-school boys and girls in rural southwest Uganda. She observed and explored their daily lives using participant observation and other ethnographic methods. Ann-Maree's research informed valuable health promotion and behaviour change initiatives. Areas of focus include delaying sexual debut, understanding the meaning of the exchange of money in sexual relationships involving adolescents, and sexual partner types and sexual health risk among adolescents.

Developing a hepatitis C vaccine

Heidi Drummer's group in the Fusion Laboratory is investigating immune responses in young people who inject drugs. Their work will identify the type of antibody and cellular responses elicited by hepatitis C during the early phase of infection and how these are modulated during the chronic phase. This work will determine how the immune response shapes the course of hepatitis C infection, and identify the correlates of viral clearance and sustained protection from hepatitis C. The results of these studies will allow us to design vaccines that elicit desirable immune responses that prevent hepatitis C infection.

“The results of these studies will allow us to design vaccines that elicit desirable immune responses that prevent hepatitis C infection.”

Improving adolescents' access to sexual and reproductive health information and care in Vanuatu

Natalie Gray and Elissa Kennedy from the Centre for International Health (CIH) collaborated with Wan Smolbag, a local community organisation in Vanuatu, on a qualitative study exploring barriers and enablers to adolescents accessing sexual and reproductive health information and care.

Female and male adolescents wanted more information on preventing pregnancy, and called for health promotion activities focused on family planning. They stressed that information on the dangers of adolescent pregnancy and the benefits of family planning should be provided to gatekeepers such as parents, and community and church leaders, as well as adolescents.

Peer education, sexuality education in schools, and youth-friendly health services were highlighted as trusted and preferred sources of family planning information and care.

Wan Smolbag and the Vanuatu Ministry of Health will use the findings to strengthen peer education and family planning programs and guide scale-up of health promotion and youth-friendly health services.



Youth-friendly health services make a difference in Vanuatu.

Indigenous health

Although the Burnet Institute has always been engaged in areas of Aboriginal health, research and education, we have committed to an Institute-wide strategy that ensures Burnet makes a sustainable and focused commitment to this important arena. To this end, the Burnet Aboriginal Health Initiative has been established to coordinate the Institute's approach and activities.

There are five reasons for engaging in this work: Aboriginal Health is a major issue of concern in Australia; it is a priority area for Government; it is aligned with the core business of the Institute; Burnet has a track record in Aboriginal health; and we have skills and competencies that will bring added value.

Our approach is underpinned by three guiding principles:

- we will be responsive to need, adding value to the pre-existing situation;
- we will utilise our competencies and interests; and
- we will work in participation and partnership.



This year has been one of partnership building and mapping out areas where Burnet can make valid and viable contributions. We have consolidated partnerships with the Menzies School of Health Research and the Baker IDI in Central and Northern Australia, and have established an MoU with the Victorian Aboriginal Community Controlled Health Organisation (VACCHO) in Victoria. Our links with Monash University (where Burnet and VACCHO deliver our Aboriginal Health Master of Public Health unit) have been strengthened further with collaboration with Monash's Department for Rural and Indigenous Health.

Developing Health Themes

Emerging and re-emerging infectious diseases (ERIDS)

Burnet Institute engages with local partners to combat malaria, tuberculosis and novel diseases like avian influenza and pandemic influenza. All Centres within the Institute have established a thematic initiative related to these emerging and re-emerging infectious diseases (ERIDS), allowing us to apply our unique blend of biomedical research and public health expertise to address these diseases.

Recent laboratory-based ERID activities include mapping immune response to pandemic influenza (Australia), improving avian influenza capacity of the National Institute of Health and Research Development (Indonesia), monitoring drug-resistant tuberculosis (Pacific), and identifying protective antibodies to aid development of malaria vaccines (PNG).

Our public health Centres have been active at the policy and planning level reviewing AusAID's pandemic and emerging infectious disease strategy and **Pacific Malaria Initiative**. We are also supporting the design of a *One Health Strategy* for the Pacific and Vietnam's pandemic

and avian influenza strategy. In Indonesia, we supervise Eijkman Institute students researching avian influenza epidemiology and we help mainstream government responses for ERIDs. The China-Australia Health and HIV Facility has strengthened early warning and outbreak response systems, preparedness for pandemic influenza and monitoring of multi-drug resistant TB (MDR-TB).

Dr Anne Ancia oversees the expansion of our ERID programs with a particular focus on supporting responses to ERIDs in the Pacific, Mekong countries and Indonesia.

Ms Wangmo from our Tibet office is joined by Melbourne-based Chris Hagarty to strengthen community responses to infectious diseases.



Specialised Research Facilities

Burnet's specialised research facilities provide services to the scientific research community here at the AMREP campus and more broadly across Melbourne and throughout Australia.

These facilities are:

Burnet ImmunoMonitoring Facility (IMF) which supports both internal and external research in vaccine development by conducting and validating relevant immunological assays to Good Laboratory Practice (GLP) standards.

Burnet Cell Imaging Facility (CIF) which provides guidance in project design and tutorials/support in image acquisition and analysis, with state-of-the-art microscopes in BSL3 and BSL2 laboratories especially designed for the live cell imaging of highly infectious human pathogens such as HIV or malaria parasites.

The AMREP (Alfred Medical Research and Education Precinct) **Flow Cytometry Core Facility** which is a world class cell sorting and cell analysis laboratory catering for the scientific research community based at AMREP and broader Melbourne.

Cell Imaging Facility:

Dr Candida da Fonseca Pereira

PH: (03) 9282 2292

Email: cfpereira@burnet.edu.au

www.burnet.edu.au/cif



ImmunoMonitoring Facility

Associate Professor Rose Ffrench

PH: (03) 9282 2285

Email: Ffrench@burnet.edu.au

www.burnet.edu.au/imf



Flow Cytometry Core Facility

Mr Geza Paukovics

PH: (03) 9282 2246

Email: paukovic@burnet.edu.au

www.amrepflow.org.au/equipment-services

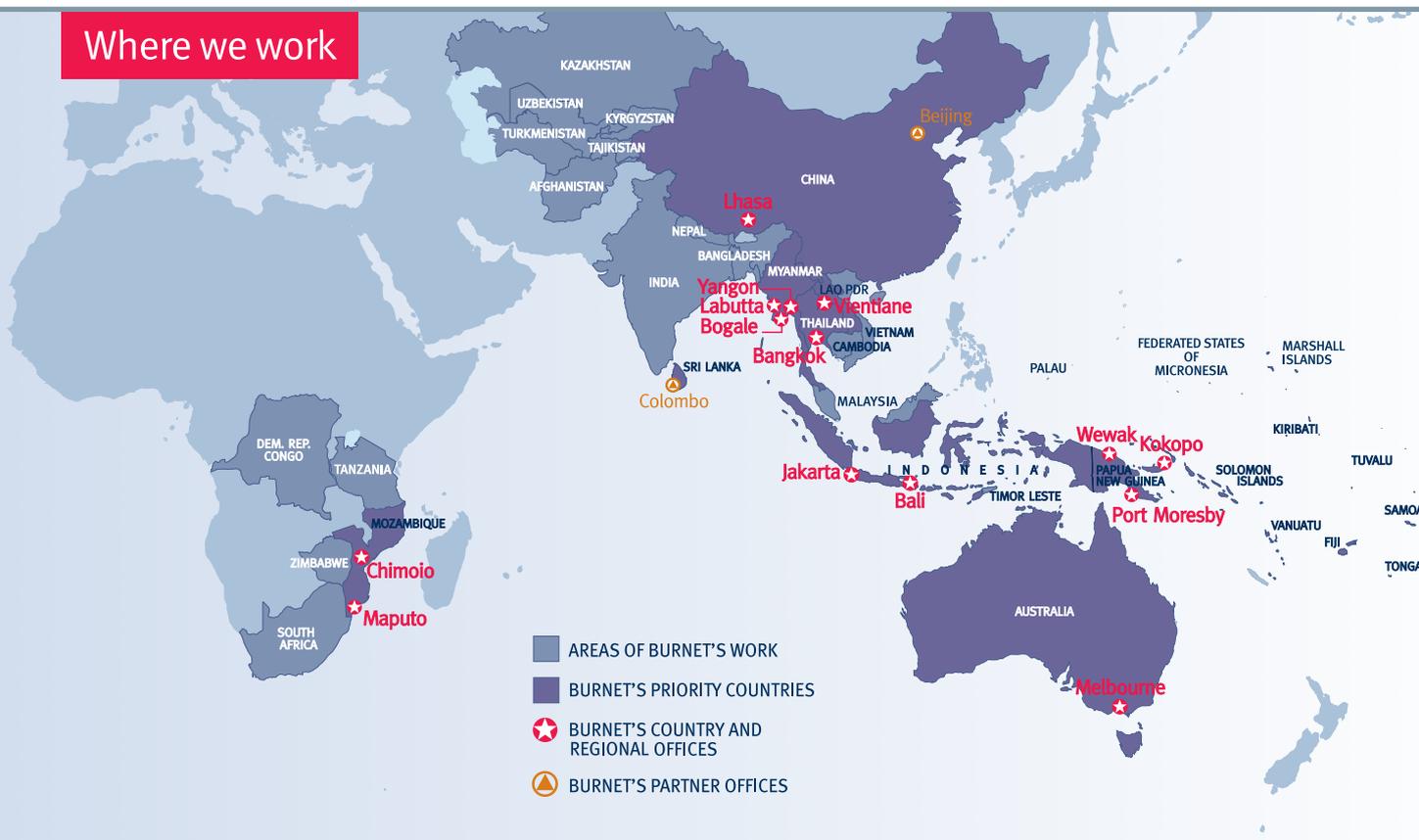
Where we work

Burnet works at international and regional levels; with governments, civil society and communities in more than eight countries, building capacity and strengthening health services to reduce the impact of major health problems.

Through our local and internationally located public health staff we are able to respond in a timely fashion to international health crises, as well as to provide training and support to Ministries of Health and community groups in our region. We have more than 150 staff based overseas in offices in Papua New Guinea, Indonesia, Lao PDR, Myanmar (Burma), China (including Tibet), Mozambique and Thailand (Bangkok) and also staff working in other many other countries through Burnet's local partners.

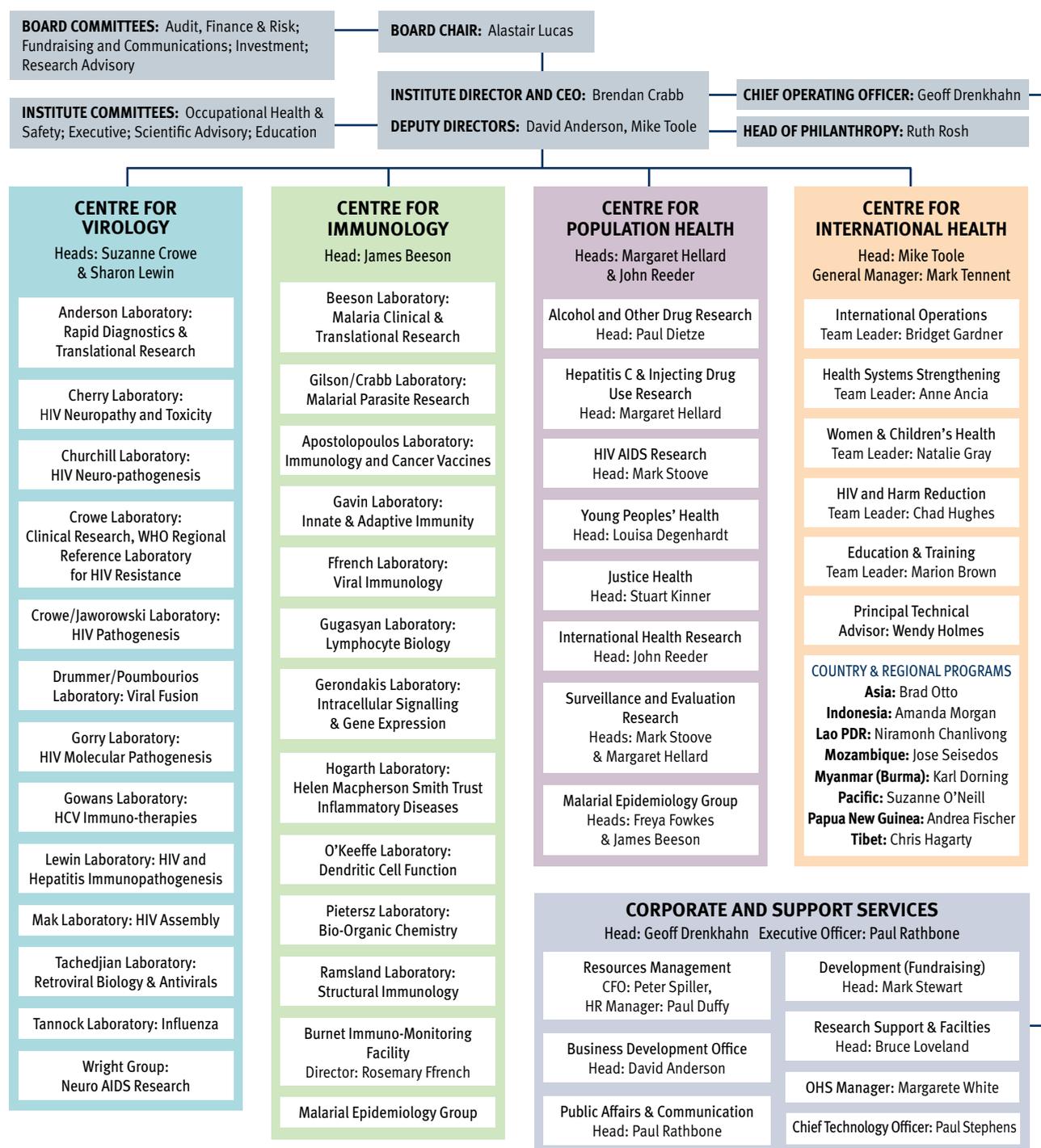


Where we work

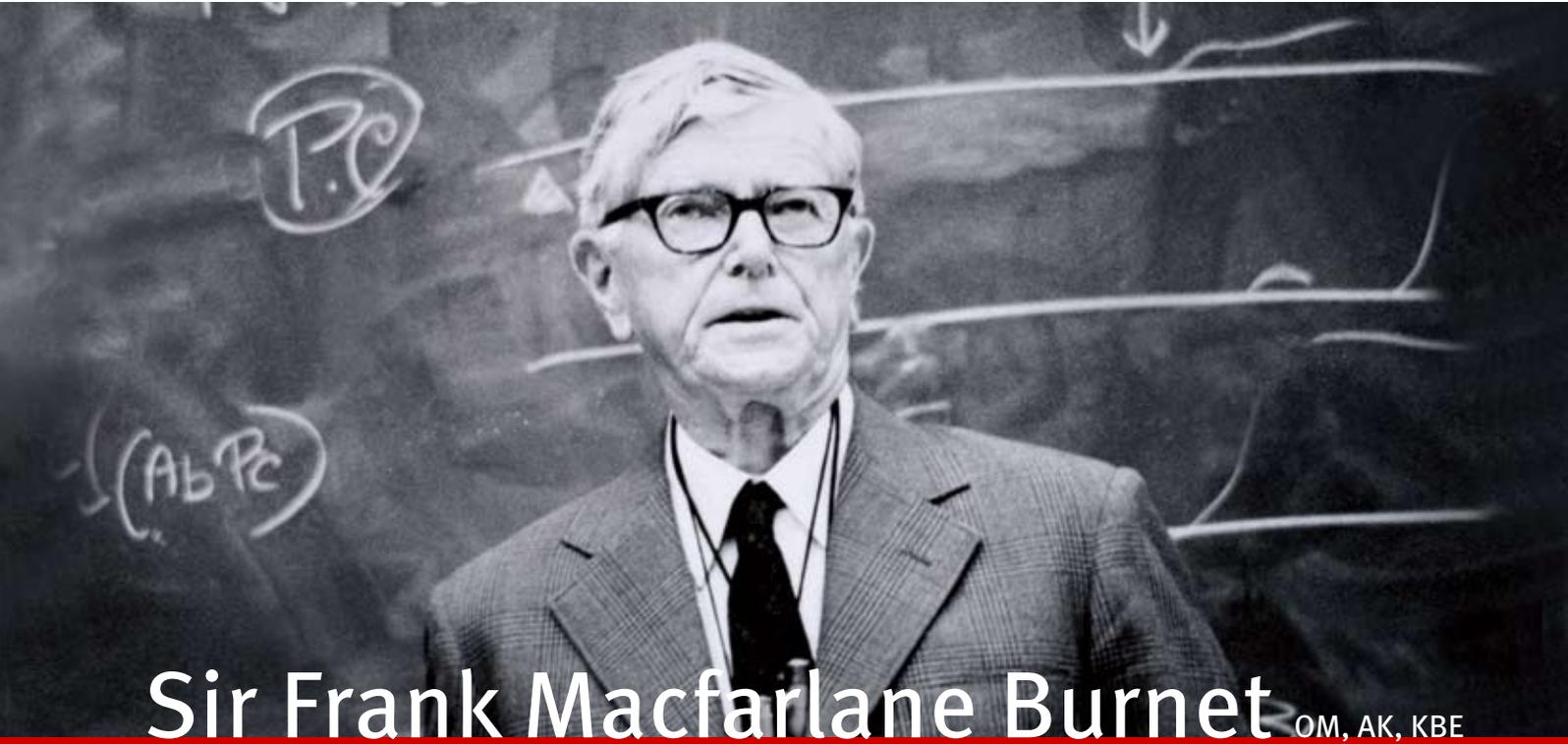


How we work

What makes our work unique is the integration of our laboratory-based medical research with field-based public health programs. Both the lab and field programs at Burnet have contributed greatly to the international body of scientific knowledge regarding infectious diseases; from diagnosis and treatments, through to the minimisation and prevention of their spread.



For more detailed information regarding Burnet's organisational structure please visit www.burnet.edu.au



Sir Frank Macfarlane Burnet OM, AK, KBE

Throughout 2010, the Burnet Institute and Australia's scientific community paid tribute to the legacy of Sir Frank Macfarlane Burnet – the 50th anniversary year of his Nobel Prize for Medicine.

Clonal Selection – the centerpiece of Burnet's research

Australia's greatest virologist and immunologist, Burnet's discovery of acquired immunological tolerance, of how the body recognises the difference between self and non-self, was a watershed in medical research. Burnet's theoretical centerpiece of his prize-winning research was 'clonal selection' – a visionary and far-reaching theory that is central to modern immunology.

Fifty years on, and five of the top 10 drugs used in the treatment of human disease are monoclonal antibodies.

Monoclonal Antibodies are the protein products of immortalised clones of white blood cells and their sales have generated more than \$20 billion in the pharmaceutical industry in 2009. These immune-based therapies have radically changed the treatment of major diseases, transforming the lives of many patients.

Burnet was a theoretician but also a pragmatist. He understood, even in the late 1950s, the practical value of immunology as having 'greater practical use in medicine' than the research fields it superseded.

“ Many of us have moments of genius but few are consistent. Burnet was extraordinarily powerful because he cared about ideas so much. ”

NOBEL LAUREATE PROFESSOR PETER DOHERTY AC.

An extraordinary life

Born in 1899, Mac Burnet was educated at Traralgon and Terang State Schools, Geelong College and Melbourne University and retained a deep memory of the influenza pandemic which swept the world in 1918-19 and worked on the virus for 25 years.

Based in London at the Lister Institute from 1925 to 1927, Burnet also worked at the National Institute of Medical Research from 1932 to 1933.

Appointed Assistant Director of the **Walter and Eliza Hall Institute of Medical Research** in Melbourne in 1928, he was its Director from 1944 to 1965 and also held the **chair of Experimental Medicine at Melbourne University**.

He irritated the medical faculty by advocating segregation of teaching and research. In 1944 he declined a glittering offer of a Harvard chair, determined to remain in Melbourne and was succeeded by his protégé Sir Gustav Nossal.

Burnet developed two international reputations, until 1957 as an authority on viruses, then as probably the world's most distinguished theoretician of immunology. He developed 'clonal selection theory' which began a new era in immunology.

He published 528 papers, more than 400 on his own research. Essentially an old fashioned, solitary, intuitive researcher, Burnet had few collaborators other than **Frank Fenner, Ian Mackay, Gordon Ada and Gus Nossal**. He was rather suspicious of ‘big science’, heavy investment in equipment and setting up research teams and wary of clinical or applied research. That misused word ‘genius’ seems appropriate in his case.

Burnet and Nossal were classic introvert and extrovert respectively, but Nossal was a consummate diplomat who made allowances for the older man.

Burnet worked with Frank Fenner on acquired immunological tolerance, the capacity of organisms to distinguish between ‘self’ and ‘not self’, which was confirmed experimentally in England by Medawar and Rupert Billingham. Burnet and Medawar received the Nobel Prize in 1960 for this work. Fenner and Billingham were very unlucky not to have shared the award because Nobel Prizes can be split into two or three awards, but not four.

No other Australian medical scientist ever received so many awards for work carried out in Australia.

Burnet received the Lasker Award in 1952, the Order of Merit in 1958, the Royal Society’s Copley Medal in 1959, and shared the Nobel Prize for Medicine in 1960 with Peter Medawar for their work on ‘acquired immunological tolerance’. Three times a knight (Knight Bachelor, KBE, AK) he became the first recipient of the Australian of the Year award in 1961 and was President of the Australian Academy of Science from 1965-69.

As Nobel Laureate, Professor Peter Doherty observed:

“Immunology has gone from strength to strength from the time of Burnet, with foci of excellence being widely disseminated throughout the Australian academic scene. For some years the rise of molecular science, particularly transfection techniques, eroded virology’s position as a central intellectual discipline, both here and globally.

“That changed though, with the emergence of HIV and AIDS and the realisation that viruses, bacteria and parasites continue to cause major loss of life in, particularly, the developing world.

“Though the third world was not Burnet’s primary focus he did, like the Institute that bears his name, tackle the big issues of his time.”

** Based on excerpts from tribute articles by Professor, the Hon. Barry O Jones, AO, Nobel Laureate Peter Doherty, Professor Mark Hogarth and Professor James McCluskey published in IMPACT, Summer 2010-11 edition.*

Right: Mac Burnet with Professor Sir Gustav Nossal.

Frank Macfarlane Burnet died at his son’s home in Port Fairy on 31 August 1985, aged almost 86.

On his tombstone in Tower Hill, near Port Fairy is a quote from Plato about Socrates:

“A man who threw off ideas like sparks which caused a blaze that leapt across to the minds of others”.



Community Engagement

Burnet engages in a wide range of activities to promote the important work undertaken here in Australia and globally. Whether it's a major event like the Melbourne City ROMP or a presentation to a secondary college, engaging with the community assists us to raise our profile and also the much needed funds to keep our work going.

UN Global Health Conference

Burnet Institute had a significant presence at a United Nations' global health conference in Melbourne with 11 staff members involved. It was the first time Australia hosted the annual United Nations Department of Public Information/Non-Government Organisations Conference, known as the **UNDPI/NGO Conference**. The vision of the conference was to highlight effective ways in which societies can contribute to fostering global health, not just managing disease.



Australasian World Music Expo

AWME is the Australia-Pacific region's **premier music industry conference** and showcase of indigenous, roots and world music. In 2010, the event attracted more than 9,000 participants. Burnet was the preferred charity and we promoted our work in Papua New Guinea and internationally throughout the four-day event.

One Man Epic

Perth man **Tom Smitheringale's** quest to be the first Australian to reach the North Pole, solo and unsupported, fell short of his dream by just 14 days suffering hypothermia. He chose Burnet Institute as his charity partner after witnessing the devastating effect diseases such as 'The Big Three': HIV, TB and malaria can have on poorer communities while on military service in Africa.

Post-Graduate Training

Burnet offers **post-graduate training** by actively teaching more than nine subject areas in the Masters of Public Health offered by Melbourne and Monash Universities. This teaching capability allows the training of public health students for the implementation of public health strategies and programs in national and international settings.

Sex, Drugs and Rock'n'Roll

Burnet studies **sexual health and drug risk behaviour/s** in young people attending a music festival – 'the big day out' in Melbourne; this serves also as a forum for raising awareness of Burnet's research in these areas and elicits strong support amongst festival attendees.

21st Century Immunology Symposium

French Immunologist Professor Bernard Malissen, of the Centre d'immunologie de Marseille Luminy, delivered the Plenary Lecture at the **21st Century Immunology Symposium**. More than 140 delegates attended the symposium, organised to reflect the contemporary consequences of Macfarlane Burnet's work – the fundamental immunological research and the outcomes of its translation in the prevention and treatment of disease. Burnet's Professor Sharon Lewin, Professor Mark Hogarth, Monash University's Professor Fabienne Mackay and Professor Jonathon Sprent from the Garvan Institute also presented.





Professor Christopher Goodnow speaks at the Burnet Oration.



The Rt Hon Sir Malcolm Fraser, AC speaks at the launch of the Foundation at Victoria's Government House.

Burnet Oration

The Burnet Oration is an annual keynote lecture aimed at a wide community audience addressing topical health and research issues. Marking the 50th anniversary of Sir Macfarlane Burnet's Nobel Prize for Medicine, **Professor Christopher Goodnow** from the John Curtin School of Medical Research at the Australian National University, presented '50 years of tolerance: controversy, validation, and evolution of Burnet's Nobel-winning theory'.

Melbourne City Romp

More than 12,000 'rompers' took part in this Amazing Race/treasure hunt to fundraise for the Burnet Institute and **raise awareness about the 'Big Three':** HIV, TB and malaria. Rompers raised \$118,000 to benefit Burnet's participation in a new HIV Research Cohort study, tuberculosis initiative and a malaria vaccine initiative.



Sir Zelman Cowen Foundation

The **Sir Zelman Cowen Foundation for Medical Research and Public Health** was officially launched by the Governor of Victoria and Patron-in-Chief of the Burnet Institute, Professor David de Kretser, AC in June. The Foundation, supporting Burnet, aims to improve the level of funding available to early-career scientists to enable them to continue their ground-breaking work in Australia.



International speakers and panellists from the AMREP World Health Day Conference.

AMREP World Health Day Conference

International speakers, panellists and participants converged in Melbourne for the fourth annual Alfred Medical Research & Education Precinct (AMREP) **World Health Day Conference**. Titled *Health and the City*, the conference focused on the implications of urbanisation for the health of poor and disadvantaged populations and approaches to improving maternal health in low-income settings.

Visitors to Burnet in 2010

The World Health Organization (WHO) hosted a global consultation on the expansion of the successful Birth-dose Vaccination for the Prevention of Perinatal Transmission of hepatitis B at Burnet Institute towards the end of 2010 with **Dr Steven Wiersma** from the WHO's Geneva headquarters leading the discussion. The WHO is investigating possibilities of introducing Burnet's birth-dose vaccination and newborn survival program to other countries after it's success in Papua New Guinea.

Burnet Institute hosted a visit by **Professor Sangkot Marzuki**, Director of Eijkman Institute for Molecular Biology in February 2010. The Eijkman Institute is an Indonesian government-funded research institute conducting basic research in medical molecular biology and biotechnology. Burnet's **Professor John Reeder**, **Associate Professor David Anderson** and **Associate Professor Margaret Hellard** co-supervised six Masters of Biomedical Science students who are undertaking research at the Eijkman Institute and Monash University.

Mr Michel Sidibé, the Executive Director of UNAIDS and Under Secretary-General of the United Nations, visited Burnet in August 2010. Mr Sidibé was in Melbourne for the United Nations Department of Public Information International Conference (UNDPI) in which our own **Dr Natalie Gray**, Women's and Children's Health Specialist, was a guest presenter.



Professor Alan Landay.

As part of the collaboration on the CD4 Test with **Professor Suzanne Crowe** and **Associate Professor David Anderson**, **Professor Alan Landay** from Rush University in Chicago visited Burnet. He also signed the Memorandum of Understanding for establishing the Rush University – Burnet Institute Consortium (RUBICON), which is proposed to fund collaborative exchanges between our respective institutions.

Dr Noel Warner, worldwide Vice President Scientific Affairs of BD Biosciences, toured the new Centre for Immunology research facilities with **Associate Professor Rosemary Ffrench** and **Professor Mark Hogarth**. BD Biosciences is a partner in the CRC for Biomarker Translation with Burnet, which is developing therapeutic antibodies for the treatment of cancer inflammation and infection.

Burnet's Associate Professor Gilda Tachedjian explains her microbicide work to Michel Sidibé.





Professor Warwick Anderson, AM, NHMRC CEO, pictured above on one of his visits to Burnet Institute in 2010 to be briefed on activities at the Institute.

Burnet Institute had the privilege of having **Dr James McCarthy** from the Queensland Institute of Medical Research come and deliver a Director's Seminar Lecture in September 2010. Dr McCarthy works on a range of tropical and parasitic infections and is currently working on projects on diagnosis and treatment of human scabies and helminth infections and on the interactions between HIV and malaria.



The then Victorian Shadow Minister for Health and Ageing, **the Hon Mr David Davis** MLC, toured the new Centre for Immunology's state-of-the-art laboratories with **Professor Brendan Crabb** in July. Construction of the new premises began in 2008 in partnership with The Alfred, with the additional floor space creating growth opportunities for the Institute across its laboratory-based research and public health programs.

The Hon Charlot Salwai, the Republic of Vanuatu's Minister for Education, toured our facilities with Rebecca Walker, a Department of Foreign Affairs and Trade Executive Officer from the Pacific Islands Branch of the department.

Burnet was fortunate to host a stimulating seminar from **Professor Michael Good**, AO, from Griffith University covering aspects of malaria immunity with great relevance to vaccine development. Professor Good is also well known in the scientific community for his efforts over many years in vaccine development against group A streptococcal infection.



On 28 July 2010, **three generations of Sir Frank Macfarlane Burnet's** family attended a donor lunch at the Institute. Burnet's daughter **Elizabeth Dexter**, (far right) grand-daughter **Jenny Dexter** and great grand-daughter **Rose Farragher** visited to commemorate the 50th anniversary year of Sir Macfarlane Burnet's Nobel Prize for Medicine.

Professor Ken Smith Head of the Department of Medicine at the University of Cambridge, delivered a presentation entitled 'Evolution and augury in autoimmune disease: Fc receptors, malaria and CD8 T-cells' to Burnet staff in October 2010. Professor Smith was elected a Fellow of the Academy of Medical Sciences in 2006 and was awarded the Lister Institute Research Prize the following year.



Burnet Institute Patron **Eddie McGuire** caught up with Chairman **Alastair Lucas** (left) and Director and CEO **Professor Brendan Crabb** (right) and took the opportunity to tour Burnet and meet some of our scientists.



Centre for Virology

mission

Our mission is to find innovative solutions for the world's most serious viral diseases, focusing on understanding how viruses manipulate their host cells in order to infect them and persist in the body. Research in this area is vital in developing ways to block infection and to prevent viruses replicating and causing disease.

Basic research underpins most major scientific discoveries. We translate a number of our research findings into clinical and public health practice. The management of chronic viral diseases requires new drugs and diagnostic tools. Research within our Centre investigates new drug targets at the molecular level.

Overview

In 2010, the Centre for Virology comprised 116 scientists (including 13 post-doctoral scientists and 26 PhD students) working in 13 laboratories or groups. During the year, honorary appointments, as Burnet Senior Principal Research Fellows, were given to **Professors John Mackenzie, AO, Steve Wesselingh, John Mills and Anne Mijch**, recognising their on-going contributions to the Centre. **Kate Cherry and Melissa Churchill** were promoted to Associate Professor by Monash University.

Two cross-disciplinary symposia during 2010 provided openings for future inter-Centre collaborations. *Shining the Light on Infectious Diseases* provided a forum for discussion of new imaging techniques and was organised by **Jenny Anderson, Gilda Tachedjian and Suzanne Crowe**. *Research Opportunities in the Region*, organised by **Kate Cherry and Suzanne Crowe** included visiting speakers **Dr Claire Ryan** from PNG and **Professor Anne Mijch**.

The Centre performed strongly with NHMRC grants in 2010 with evidence of increased inter-laboratory/inter-Centre collaboration. In addition, **Edwina Wright** was awarded an NHMRC Postgraduate Fellowship and **Johnson Mak** an ARC Future Fellowship. **Gilda Tachedjian** received a grant from the Prostate Cancer Foundation of Australia.

Sharon Lewin was an invited plenary speaker at the opening of the XVIII International AIDS Conference in Vienna, speaking on *State of the epidemic: towards a cure*. **Melissa Churchill** also gave an invited plenary presentation on *HIV-1 Reservoirs in the CNS* at the 10th International Symposium on Neurovirology, Milan, Italy. **Suzanne Crowe** was the invited plenary lecturer at the 2nd National Congress on Tropical and Infectious Diseases in Bali, speaking on *The Changing Face of Clinical Management of HIV Infection*. **Gilda Tachedjian** was Convenor of the ASMR National Scientific Conference on Infection and Disease in Melbourne. **Edwina Wright** received an award from the Victorian AIDS Council and Gay Men's Health Centre for her work with the Australian National NeuroAIDS Brain and Tissue Bank Project.

Among the numerous awards to Centre scientists in 2010: **Christina Chang** (Lewin Laboratory) won the Pfizer award for Research in Neurosciences and **Gregor Lichtfuss** (Crowe/Jaworowski Laboratory) was the winner of the Victorian GSK-Ausbiotech Award and a finalist in the National GSK-Ausbiotech Awards. Among the Burnet 2010 award winners **Lachlan Gray** (Churchill Laboratory)

received the Burnet Harold Mitchell Foundation Postdoctoral Travel Award and **Michael Roche** (Gorry Laboratory) was awarded the Harold Mitchell Foundation Postgraduate Student Travel Award. The Crofts Publication Award was jointly awarded to **Melissa Churchill** (Centre for Virology) and **Paul Gilson** (Centre for Population Health). The Centre also received a large proportion of HIV awards from the ACH2 Conference: **Lachlan Gray**, Gilead Early Career Investigator Gold Medal (Churchill Laboratory); **Marcel Hijnen**, AGRF Early Career Investigator Silver Medal (Mak Laboratory); **Jasminka Sterovski**, Burnet Institute Early Career Investigator Bronze Medal (Gorry Laboratory); **Redmond Smyth**, Olympus Student Gold Medal (Mak Laboratory); **Gregor Lichtfuss**, Siemens Student Silver Medal (Crowe/Jaworowski Laboratory); and **Michael Roche**, ASM Student Bronze Medal (Gorry Laboratory).

The Centre continues to attract excellent young scientists. Among recent graduates are **Yagmur Farsakoglu** (Crowe/Jaworowski Laboratory) who received first-class honours in Microbiology, La Trobe University; first-class honours was also awarded to **Kieran Cashin** (Gorry Laboratory) from Microbiology and Immunology, University of Melbourne. Post doctoral scientist **Anna Maisa** from the Institute of Virology, Philipps University, Marburg, Germany, joined the Crowe/Jaworowski Laboratory funded by the Deutscher Akademischer Austauschdienst. **Gilda Tachedjian** hosted **Sophie Montag** from the Lausitz University of Applied Sciences, Germany.

HIV-associated neurological disorders

The **Wright Group** is focused upon HIV-associated neurological disorders in diverse international settings. In the Asia and Pacific regions a large proportion of people in need of HIV antiretroviral therapy do not receive it and are at risk of HIV neurological disease. We have undertaken important epidemiological work on NeuroAIDS in both Asia and the Pacific.



Centre for Virology Laboratory Heads

We led the international SMART Neurology Substudy that examined the neurocognitive performance of HIV-positive patients randomised to receive continuous versus intermittent treatment for HIV infection. We found that cardiovascular risk factors correlated strongly with poor neuropsychological performance. As a result, we recommended that patients be screened and treated for cardiovascular risk factors and disease to offset any potential contributory effects upon their cognition.

The Group is currently leading another international study that is assessing the impact of early versus deferred HIV treatment upon neurocognitive performance of healthy HIV-positive patients. This study, the **START** Neurology substudy, is being undertaken in several resource-varied settings.

The Wright Group also heads the **Australian National NeuroAIDS Brain and Tissue Bank Project** which enrolls HIV positive people who have agreed to undergo annual neurological evaluations and to donate their brains at the time of death. This national resource will serve as a future research repository for Australian and international researchers working in the field of neuroAIDS.

Identifying new therapeutic targets

The **Viral Fusion Laboratory** investigates how two major human pathogens, human immunodeficiency virus (HIV) and hepatitis C virus (HCV), attach to and enter cells. There are approximately 33 million people living with HIV/AIDS while HCV infects over 200 million people worldwide. The high degree of genetic diversity of HCV and HIV has challenged conventional vaccine design strategies. Our goal is to use basic science to identify new therapeutic targets and rationally design vaccines against these agents.

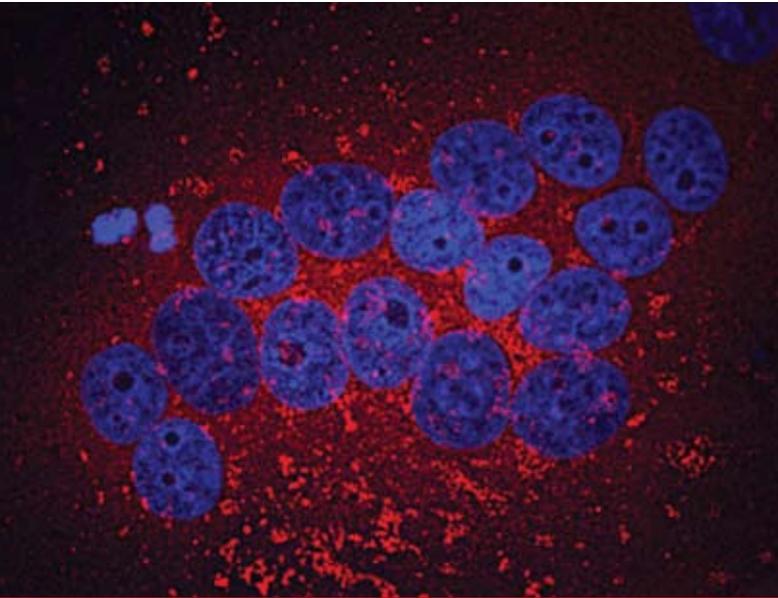
Proteins on the surface of viral particles mediate attachment to cellular receptors and then fusion of the virus and cell membranes, which are essential steps leading to viral entry. Understanding these processes at the molecular level enables us to identify ways in which we can block viral attachment and membrane fusion using antiviral agents.

In addition, it enables us to design novel vaccines based on the viral surface proteins to elicit an antibody response capable of blocking (neutralising) attachment of viruses to cells. We have successfully used this approach to synthetically construct a modified form of the HCV attachment protein and have shown that it elicits a neutralising antibody response that can prevent infection with HCV in *in vitro* studies. This modified form of the HCV attachment protein is now a lead vaccine candidate and further studies will examine its potential for use as a prophylactic HCV vaccine.

The life cycle of HIV

The HIV Molecular Pathogenesis Laboratory headed by **Associate Professor Paul Gorry**, aims to understand the very earliest steps in the life cycle of HIV, namely how the virus interacts with cellular receptors to enter cells.

In addition, we are demonstrating how alterations in this process accelerate the destruction of CD4+ T-cells in HIV-infected people and how this also renders macrophages susceptible to infection. Moreover, we are demonstrating how alterations in the way HIV engages cellular receptors facilitates viral escape from new drugs that block virus entry. Understanding the nature by which HIV enters cells of the immune system is important for better understanding HIV replication and therefore important for developing new ways to combat HIV infection.



A giant, multinucleated syncytium that has formed after HIV infection of human TZMbl cells.

Developing the Burnet AX-2 CD4 test reader

David Anderson and Suzanne Crowe have continued development of a rapid point-of-care test for measurement of CD4+ T-cells in HIV-infected patients - an essential tool for management of drug therapy but rarely available in the countries most affected by HIV/AIDS. A major focus during 2010 has been our work together with Melbourne-based Axxin Ltd to develop the Burnet AX-2 CD4 test reader, with partial support from an ACH2 grant.

This simple robust instrument provides stepwise instructions for the assay and then captures a detailed image, and provides a precise readout of the test line signals in the disposable visual CD4 test device. This provides enhanced accuracy for samples near the assay cut-off, but more importantly allows for improved quality control in assay design and manufacturing. This is especially important in light of the recent changes to the recommended cut-off for CD4+ T-cells stipulated by the World Health Organization (WHO), which required us to change the test cut-off from 200 to 350 cells/microlitre. Clinical trials are planned to commence in mid-2011.

Building on the recent publication of our syphilis IgM test, we are now collaborating with The Kirby Institute and others in a major trial to compare a number of rapid, point-of-care syphilis tests in Australia and PNG. This trial will identify the best test(s) for further evaluation as tools in the fight to reduce syphilis, and especially congenital syphilis, that continues to be a scourge in many developing countries.



Burnet continues to develop and refine its rapid diagnostic kit for measurement for CD4+ T-cells.

The central nervous system as a viral reservoir

HIV-1 cannot be eradicated by antiretroviral therapies alone. The major obstacle to eradicating HIV-1 is the ability of proviral DNA to persist latently in cellular reservoirs. Resting memory T-cells are the best characterised HIV-1 reservoirs, but other cells such as astrocytes in the brain are also latently infected. Unique regulatory mechanisms directing HIV-1 persistence in astrocytes and the critical nature of these cells for maintaining normal brain function, pose important challenges to strategies that aim to completely eradicate HIV-1 from the body.

Led by **Melissa Churchill**, the aim of the HIV Neuropathogenesis Laboratory is to understand the mechanisms by which HIV-1 infects the brain and persists in the central nervous system. Understanding these mechanisms is essential to the development of therapeutic strategies aimed at eradication of HIV-1 from the infected individual and a potential 'cure' of HIV-1 infection.

Improving the growth of influenza B viruses for use in vaccines

Seasonal vaccines against influenza usually consist of the surface antigens of specified epidemic strains of the influenza A of the H1N1 and H3N2 subtypes, and influenza B viruses. Most vaccines are prepared from viruses grown in fertile chicken eggs but new seasonal influenza viruses often grow poorly in eggs. The growth of seasonal influenza A viruses can be improved by the inclusion of certain genes in the virus. Unfortunately, a similar approach is difficult to achieve with influenza B viruses.

The reasons for these difficulties are largely unknown. Several reports have suggested the use of adaptation to growth at lower temperatures (25°C; cold-adaptation) as a means of enhancing influenza B virus yields. In this project, which is supported by CSL Ltd, the only influenza vaccine manufacturer in the Southern Hemisphere, the properties of recent influenza B viruses have been compared under different growth conditions to identify reasons for erratic growth in eggs.

Several high-yielding, cold-adapted strains continue to be examined by the **Tannock Laboratory** as potential high-yielding donor strains in the preparation of vaccine reassortants.

Centre for Virology: our staff and students

CENTRE HEADS: Suzanne Crowe, MBBS, FRACP, MD, NHMRC Principal Research Fellow
Sharon R Lewin, MBBS, FRACP, PhD, NHMRC Practitioner Fellow

Personal Assistant to Suzanne Crowe: Karen O'Keefe **Personal Assistant to Sharon Lewin:** Sandy West

ANDERSON/CROWE LABORATORY – DIAGNOSTICS AND APPLIED RESEARCH

Co-Heads/Burnet Senior Principal Fellows

David Anderson, BSc(Hons), PhD,
NHMRC Senior Research Fellow, level B
Suzanne Crowe, MBBS, FRACP, MD,
NHMRC Principal Research Fellow

Senior Research Fellow

Suzanne Crowe, MBBS, FRACP, MD,
NHMRC Principal Research Fellow

Senior Research Officers

Mary Garcia, Dip Lab Tech
Peter Williamson, PhD

Research Officer

Nadine Barnes, BSc(Hons)MSc

Research Assistants

Simone van de Waarsenburg,
BSc(Hons)
Jocelyn Diaz, BSc

Students

Hyunsuh Kim, MS (Vet Med), BSc
Joy Liu, Undergraduate Research
Opportunity Program (UROP)

Emeritus Professor, Burnet Institute Visiting Fellow

Gregory Tannock, MSc, PhD, DSc, FASM

CHERRY LABORATORY – HIV NEUROPATHY AND TOXICITY

Head

Catherine (Kate) Cherry, MBBS, PhD,
FRACP, Grad Dip (Clin Epi)

Senior Research Officer

David Hooker, BSc, MSc

Research Assistant

Masqura Mobarok, BSc(Hons)

Students

Soula Fillipas, BPhysio, MPH
Constance Chew, BSc(Hons)

CHURCHILL/WESSELINGH LABORATORY – HIV NEUROPATHOGENESIS

Co-Heads

Melissa Churchill, BSc(Hons), PhD
Steve Wesselingh, BMBS, PhD, FRACP

Post-doctoral Fellow

Lachlan Gray, BSc(Hons)

Students

Daniel Cowley, BAppSci(Hons)
Hamid Salimi, BSc, MSc

CROWE LABORATORY – CLINICAL RESEARCH, WHO REGIONAL REFERENCE LABORATORY FOR HIV RESISTANCE

Head

Suzanne Crowe, MBBS, FRACP, MD,
NHMRC Principal Research Fellow

Senior Scientists

Vicki Edouard, BSc(Hons), Grad Dip Ed
Adele Lee-Wriede, BSc(Hons), MSc

Quality Manager

Eman Aleksic, BSc(Hons)

Post-doctoral Supervising Scientist

Anna Hearps, BSc(Hons), PhD

Research Assistants

Eman Aleksic, BSc(Hons)
Annike Griffey, BSc, Grad Dip Bio Sc
Megan Plate, BSc, Grad Dip Ed

Student

Ope Maroba, Hons

CROWE/JAWOROWSKI LABORATORY – HIV PATHOGENESIS

Co-Heads

Suzanne Crowe, MBBS, FRACP, MD,
NHMRC Principal Research Fellow
Anthony Jaworowski, BSc(Hons), PhD

Post-doctoral Scientists

Anna Hearps, BSc(Hons), PhD
Clare Westhorpe, BSc(Hons), PhD
Adrian Achuthan, BBiomedSci(Hons),
PhD
Louise Ludlow, BSc(Hons), PhD
Anna Maisa, Dipl Biol, PhD

Research Assistants

Jing-Ling Zhou, BSc, MBiotech
Wan-Jung Cheng, BSc, MSc

Students

Emma Tippett, BSc(Hons)
Gregor Lichtfuss, Dipl Biol, MSc
Tom Angelovich, BSc, M Biotech
(Clin Microbio)
Yagmur Farsakoglu, BSc

DRUMMER/POUMBOURIOS LABORATORY – VIRAL FUSION

Co-Heads

Heidi Drummer, BSc(Hons), PhD Burnet
Principal Fellow, NHMRC RD Wright Fellow
Pantelis (Andy) Pountourios,
BSc(Hons), PhD

Senior Burnet Fellow

Elizabeth Grgacic, BSc, MSc Prelim, PhD

Research Officers

Rebecca Butcher, BSc(Hons), PhD
Louise Ludlow, PhD

Post-doctoral Fellows

Patricia Vietheer, BSc(Hons), PhD
David Harrison, BSc(Hons), PhD

Research Assistants

Chan-Sien Lay, BSc(Hons)
Kevin te Wierik, BSc(Hons)
Irene Boo, BBiomedSci(Hons)
Annemarie Laumaea,
BBiomedSci(Hons)

Students

Johanna Dean, BSc(Hons)
Anna Bellamy-McIntyre, BSc(Hons)
Yousef Alhammad, BVetsSci,
BSc(Hons), MBioMedSci
Ashraf Khasawneh, BMed, BSur,
MBioMedSci
Hamed Gouklani, BSc, MSc
Kathleen (Kitty) McCaffrey,
BSc(Hons), BA

GORRY LABORATORY – HIV MOLECULAR PATHOGENESIS

Head/Burnet Principal Fellow

Paul Gorry, BAppSci(Hons), PhD

Post-doctoral Fellow

Jasminka Sterjovski, BSc(Hons)

Research Assistants

Anne Ellett, BSc
Kieran Cashin, BSc(Hons)

Students

Michael Roche, BSc(Hons)
Katharina Borm, BSc

Centre for Virology: our staff and students

GOWANS LABORATORY – HEPATITIS C IMMUNITY AND IMMUNOTHERAPIES

Co-Heads

Eric Gowans, MAppSci, PhD, NHMRC
Senior Research Fellow

Bruce Loveland, BSc(Hons), PhD,
Burnet Principal Fellow

Senior Research Officer

Shuo Li, PhD

Students

Sook-San Wong, BMedSc(Hons), MSc,
PhD (from Aug)

Philippe Latour, BSc(Hons)

Ali Gorzin, BSc, MSc

Calum de Burgh

MAK LABORATORY – HIV ASSEMBLY

Head

Johnson Mak, BSc, PhD

Senior Research Officers

Candida da Fonseca Pereira, BSc, PhD

Marcel Hijnen, BSc, PhD (to Mar)

Research Officers and Research Fellows

Paula Ellenberg, BSc, MSc, PhD
(to July)

Kate Jones, BSc(Hons), PhD

Redmond Smyth, BSc(Hons), MPhil,
PhD (from Sept)

Students

David Hawkes, BSc(Hons)

Bevan Hirst, BSc

Hamid Salimi, BSc, MSc

Redmond Smyth, BSc(Hons), MPhil
(to Sept)

Visiting Scientist

Cornelis Coppens, BSc

Research Assistant

Hanumant Tanwar, BSc(Hons)

TACHEDJIAN LABORATORY – MOLECULAR INTERACTIONS

Head

Gilda Tachedjian, Principal Burnet
Fellow, BSc(Hons), PhD

Senior Burnet Fellow

Secondo Sonza, BSc(Hons), PhD

Senior Research Officer

Jenny Anderson, BSc(Hons), PhD

Research Assistants

Katie Moore, BSc(Hons)

David Tyssen, BAppSc Biotech

Adam Johnson, BSc(Hons)

Sushama Telwatte, BioMedSc(Hons)

Tasnim Zakir, BSc(Hons)

Students

Johanna Wapling, BSc(Hons)

Soo Huey Yap, BSc(Hons)

Jennifer La, BMedChem(Hons)

Visiting Scientist

Sophie Montag, BAppSc

BURNET AFFILIATED LABORATORIES

LEWIN LABORATORY – HIV AND HEPATITIS IMMUNOPATHOGENESIS

Head

Sharon R Lewin, MBBS,
FRACP, PhD, NHMRC Practitioner
Fellow

Personal Assistant to Centre Head

Sandy West

Deputy Head

Paul U Cameron, FRACP,
FRCPA, PhD

Post-doctoral Fellows

Suha Saleh, PhD

Paula Ellenberg, PhD

Megan Crane, PhD

Jennifer Audsley, PhD

Miranda Smith, PhD

Research Assistants

Ajantha Solomon, BSc(Hons)

Georgina Sallmann, BSc(Hons)

Pushparaj Velayudham, BSc(Hons),
MBiotech

Students

Gabriella Khoury, BSc(Hons)

Vanessa Evans, BSc(Hons)

David Iser, MBBS, FRACP

Chris Desmond, MBBS, FRACP

Reena Rajasuriar, BPharm(Hons),
MPharm

Christina Chang, MBBS, FRACP

Gregor Lichtfuss, (Monash
International Postgraduate
Scholarship) Monash University

Fiona Wightman, BSc(Hons)

Michelle Yong, MBBS, FRACP

Baotuti Sebalao

Chris Robson

WRIGHT GROUP

Head

Edwina Wright, MBBS, FRACP

Research Officer

Luxshimi Lal, BAppSci, BPharm

NHMRC FELLOWS

NHMRC Principal Research Fellow

Suzanne Crowe

NHMRC Senior Research Fellow

David Anderson

Eric Gowans

Gilda Tachedjian

NHMRC Practitioner Fellow

Sharon Lewin

NHMRC Career Development Awards

Paul Gorry

Heidi Drummer

Kate Cherry

NHMRC Peter Doherty Fellow

Hilary Hoare

OTHER FELLOWSHIPS

Australian Future Fellow

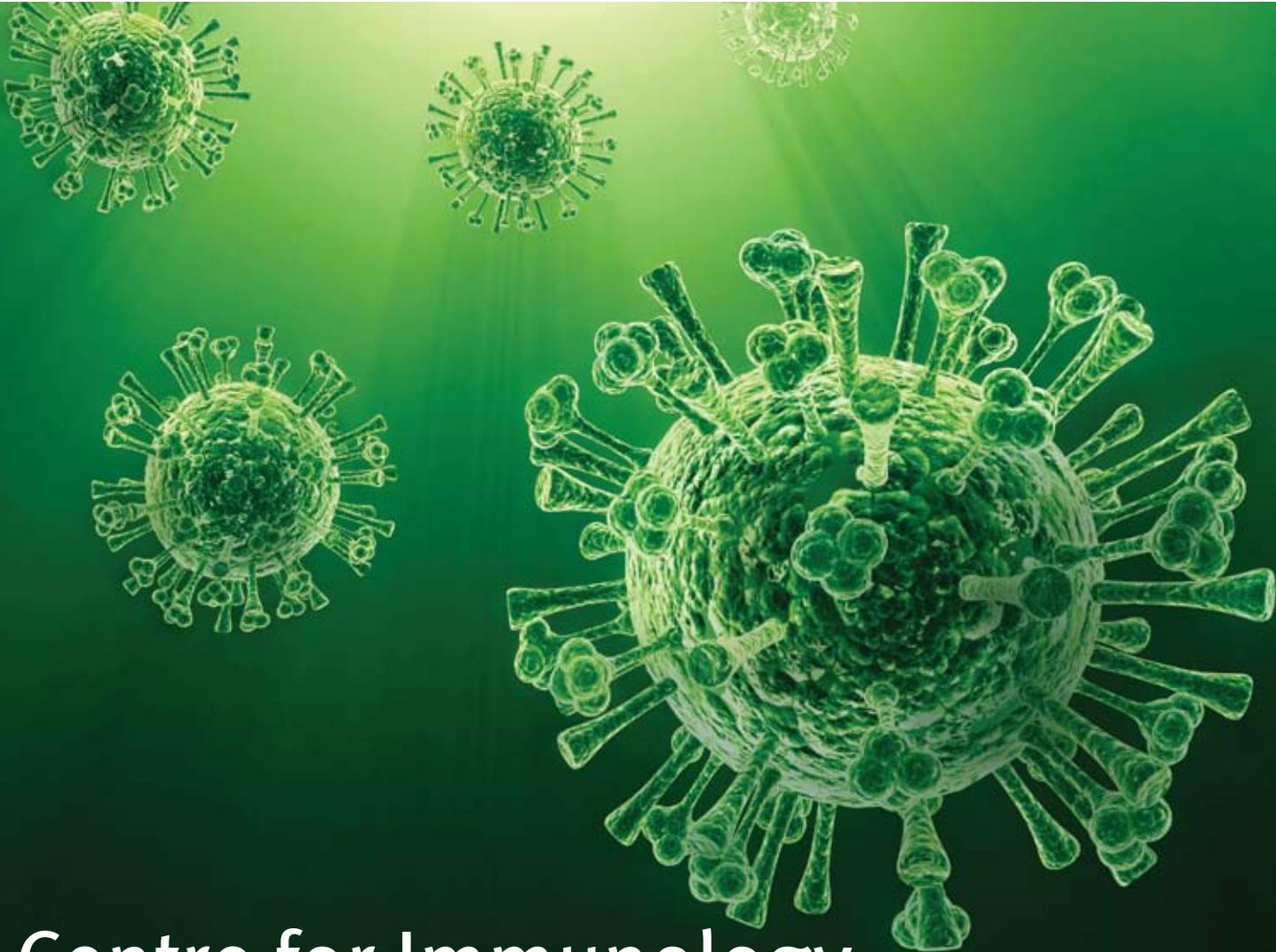
Johnson Mak



Centre for Virology Laboratory Heads, page 28.

(L-R): Associate Professor Heidi Drummer,
Dr Edwina Wright, Associate Professor
Gilda Tachedjian, Associate Professor
Johnson Mak, Professor Suzanne Crowe,
Associate Professor David Anderson,
Dr Andy Poubourios, Dr Bruce Loveland,
Associate Professor Anthony Jaworowski,
Emeritus Professor Gregory Tannock,
Professor Sharon Lewin, Associate
Professor Melissa Churchill.

*Absent: Associate Professor Catherine
(Kate) Cherry, Professor Steve Wesselingh,
Associate Professor Paul Gorry, Professor
Eric Gowans.*



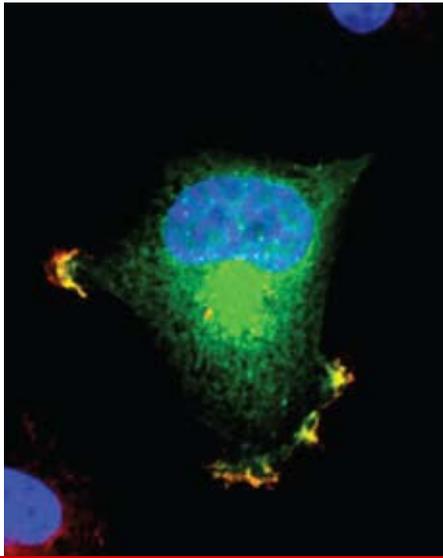
Centre for Immunology

mission

Our mission is to develop novel ways to prevent or treat major infectious diseases, cancers, and autoimmune diseases. Burnet's Centre for Immunology brings together outstanding research groups and integrates fundamental and applied research programs to understand the way the immune system functions in health and disease. This knowledge is used for the development of novel treatments and vaccines for major human diseases.

Overview

2010 was noted by many highlights and a successful year for the Centre. An exciting and important event was the moving of Centre staff, students and research programs into our modern new laboratory and offices on level 7 of the Alfred Centre.



Top: Cells expressing Fgd2, a protein that modulates the architecture of immune cells.

The new facilities provide expanded laboratory and office space, including facilities for specialised research activities, and meeting and seminar rooms. This was an important step towards strengthening our research capacity and maximising the success and output of our research programs, and our ability to continue our strong focus on translational research – that is, research that makes the link between laboratory and clinical or population studies.

Burnet's ImmunoMonitoring Facility also relocated to the new facilities and obtained accreditation from the National Association of Testing Authorities which was an important achievement, enhancing the IMF's capacity to perform immunologic assays in clinical trials (see page 17 for further information).

Amanda Gavin joins the Centre for Immunology



Amanda Gavin

We welcomed the arrival of **Amanda Gavin** who returned to Australia after 11 years at the Scripps Research Institute in the USA. Amanda had previously completed a PhD through the University of Melbourne based at the Austin Research Institute.

Amanda established the Leukocyte Development in Health and Disease Group, which is focused on understanding

how responses by the immune system can lead to the development of autoimmune diseases.

Her current work focuses on Crohn's disease, which is an important autoimmune disease of the gastro-intestinal tract that is driven by both an abnormal immune system and gut bacteria. Crohn's disease can lead to many serious, disabling and life-threatening complications. There are presently limited treatment options available and little understanding of the causes of the disease and how it can be prevented. Amanda received a prestigious ARC Future Fellowship to return to Australia.



Centre for Immunology Laboratory Heads

Grants and awards:

Mark Hogarth, Bruce Wines, Maree Powell, Meredith O’Keeffe, Ashish Banerjee, Amanda Gavin and Paul Ramsland (with colleagues in Centre for Virology) were all successful in securing NHMRC grants and Meredith O’Keeffe obtained a NHMRC Career Development Award.

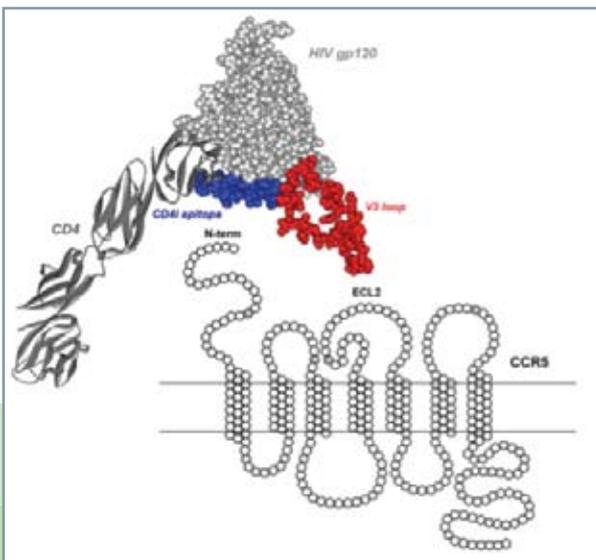
The achievements of researchers in the Centre were also recognised through several awards. Vasso Apostolopoulos received the Gordon Ada Senior Travel Award from the Australian Society of Immunology, Greek Australian of the Year Award, and the Vice-Chancellors Citation for Outstanding Engagement Award of Victoria University. Stephanie Day received a Multiple Sclerosis International Federation (MSIF) Du Pre Grant, London UK, and Ian Potter Foundation Travel Prize. Honours research students Elisha Horat, Ineke Booth and Arthi Arumugulma all received first class honours.

Structural biology and HIV: the architecture of HIV-1 interactions with a co-receptor on macrophages

A cross-cutting collaboration between Paul Ramsland’s (Centre for Immunology) and Paul Gorry’s (Centre for Virology) laboratories has established a computational approach for predicting three-dimensional structures of a HIV-1 surface glycoprotein (gp120), which mediates entry into cells (see figure below).

Dr Jasminka Sterjovski and Michael Roche (PhD student) were joint lead authors on the first in a series of papers (Sterjovski et al, 2010, *Virology*) that examine the structural mechanisms for engagement of the host receptors (CD4 and co-receptors CCR5 and CXCR4) by a series of gp120 variants isolated from HIV-1 infected people.

The initial experiments examined the capacity of the gp120 variants to mediate CCR5-dependent viral entry into human monocyte-derived macrophages (MDM). The range of MDM entry efficiencies was correlated with the capacity of gp120 to use low levels of CCR5 in a cell-based fusion assay. This finding suggested that the gp120 interaction with CCR5 may differ in strength or architecture (i.e. three-dimensional arrangement of the interacting partners) between different primary HIV-1 isolates. The capacity of gp120 to tolerate mutations at key positions of CCR5 was tested and compared against viral entry into MDM. Critical sites were found to be located in the N-terminal region (first segment of the protein) and the extracellular loop region 2 (ECL2) of the co-receptor.



This diagram shows the interactions between HIV-1 gp120 and cellular receptors that mediate viral entry into macrophages.

For the macrophage tropic gp120 molecules there was a tendency towards decreased dependence on the N-terminus and a clearly increased requirement for engagement of the ECL2 region of CCR5.

Structural models of the gp120 proteins were generated and employed to understand the potential structural basis for differential engagement of CCR5. This approach suggested that gp120 employs a variety of strategies for altered CCR5 engagement, but a prominent structural role was observed for residues around the base and within the loop stems of the variable loop 3 (V3) of gp120. Our ongoing structure-function studies should lead to a detailed structural understanding of viral cellular entry and pathogenesis.

Dendritic cell function: The production of interferon-lambda by dendritic cell subsets

Dendritic Cells (DCs) are sentinels of the immune system. They sense pathogen invasion via specific receptors expressed on the surface and inside the cells, which are known as Pattern Recognition Receptors (PRR).

There are many types of DCs and they express different PRR. **Meredith O’Keeffe** and her group have further clarified exactly what PRR are expressed by DCs by analysing the proteome, or entire suite of proteins, expressed by different subsets of DCs, in collaboration with colleagues in Munich at the Max Planck Institute for Biochemistry and Bavarian Nordic GmbH (Luber et al., *Immunity* 2010).

Assisted by information learnt from the proteomics study they have also shown that a particular type of DC (the CD8+ DC in mice and the CD141+ dendritic cells in humans) is a major producer of interferon-lambda (IFN- λ) in response to viral RNA (Lauterbach et al, 2010). These DCs are known to be important in inducing potent T-cell responses in viral infections. IFN- λ is a recently identified cytokine that has been shown to play an important role in protection against mucosal viral infections and may be important for clearance of hepatitis C infection, and the cells that make IFN- λ have been ill-defined. We are now investigating how IFN- λ production by these DC subsets may promote or otherwise affect the immune response to infection.

Understanding how IFN- λ works in the immune system may advance the development of therapies and vaccines against viral infections and autoimmune diseases.

Lymphocyte biology: A role for NF κ B1 in immune homeostasis

Mice lacking the NF κ B1 gene, which is involved in cell signaling within the haematopoietic compartment, develop a lymphoproliferative disease with features that resemble autoimmune disease.

Seven months after the transfer of NF κ B1-deficient haematopoietic stem cells into normal wild-type host mice, 95 percent of mice developed a multi-organ lymphoid infiltrate resembling the human autoimmune condition systemic lupus erythematosus (SLE).

Characterisation of these responses revealed a marked increase in specific immune cells (B-cells and CD4+ T-cells) in organs such as the liver, lungs and pancreas. In all cases tested to date, autoantibodies were detected in the sera of mice lacking NF κ B1 within the immune system. Collectively, these observations reveal a vital role for NF κ B1 in maintaining the normal integrity of the adaptive immune system, as the absence of this regulatory protein may lead to development of a severe autoimmune-like disease.

These studies have been led by **Elisha Horat** and **Raffi Gugasyan** with collaborations from across the Precinct and elsewhere. These findings provide important insights into the development of autoimmune diseases and how novel therapies may be developed to target NF κ B1.

Bio-organic and medicinal chemistry: Designing new vaccines and therapies

Geoff Pietersz and colleagues are involved in the design of novel drug and vaccine delivery systems for viral infections and cancer. They have successfully validated a new composition of their cancer vaccine, MFP, in animals and *in vitro* human cell culture.

An approach involving the mixing of mannan with whole inactivated influenza vaccine developed by the group has been further optimised using an intramuscular/intranasal prime boost immunisation strategy, designed to enhance immune responses at mucosal surfaces like the lungs. Membrane translocating peptides were also successfully used to deliver multiple antigenic tumour peptides and confer protection to mice from tumour challenge.

Furthermore, they have utilised a small chemical entity that activates an intracellular signaling pathway to increase the immunogenicity of DNA vaccines.

“ Our ImmunoMonitoring Facility obtained accreditation from the National Association of Testing Authorities, which was an important achievement, enhancing its capacity to perform immunologic assays in clinical trials. ”



Viral immunology: Immune responses in hepatitis C virus infection

It is still not understood why some people when infected with hepatitis C virus (HCV) are able to quickly clear the infection, while others go on to life-long infection and serious complications like cirrhosis and liver cancer. Recent studies have shown that a new type of interferon (IFN- λ) may be a critical factor in affecting this outcome and may influence the generation of effective immune responses.

In collaboration with colleagues from across most Centres of the Institute, **Rose Ffrench** and her group have been studying immune responses and IFN-lambda production in the ‘Networks’ cohort of young injecting drug users. They have shown clear differences in the nature of the immune responses generated in those that resolve HCV infection compared to those with chronic infection, and further studies aim to elucidate the mechanism behind these differences. Insights from these studies may contribute to advancing the development of new treatments and vaccines for hepatitis C.

Immunology and cancer vaccines: Dendritic cell development

Studies by **Vasso Apostolopoulos** and her lab have revealed that small chemicals known as reactive oxygen species (ROS) may be responsible for the development of dendritic cells (DCs), which play key roles in immune responses (Sheng KC et al., *J. Immunol*, 2010). ROS have been implicated in various physiological activities.

However, their role in DC activation and generation had not been investigated. Induction of ROS, correlated with inflammatory DC and functionality. These findings point to the potential role of cellular ROS in DC function and development during inflammation.

Infection, cancer and autoimmune diseases: Identifying new therapies

Infection, cancer and autoimmune diseases are diseases that, on the face of it, have little in common. However, a newly discovered white blood cell type called Th17 may have major roles in all three diseases. These cells normally fight infection but also appear to promote destructive inflammation in autoimmune disease or inflammation that assists cancer cell growth.

Mark Hogarth and colleagues aim to identify new therapies and understand mechanisms of disease development. They are isolating Th17 cells from mice expressing human Fc receptors that develop destructive autoimmunity, and from patients with inflammatory autoimmune diseases like rheumatoid arthritis or lupus.

Studies in mice suggest that infection may trigger a series of events leading to the development of Th17 cells that results in arthritis and a Lupus-like syndrome. Indeed changes in white blood cell hormone levels, especially IL 21 and IL 23, are part of this process and precede disease.

In patients, and with the CRC for Biomarker Translation, they have analysed 34,000 genes and surface proteins from Th17 cells to find unique molecules associated with disease that can be targeted for novel therapies that eliminate these cells in arthritis, lupus and cancer.

Centre for Immunology: our staff and students

CENTRE HEADS: P Mark Hogarth, PhD, NHMRC, Senior Principal Research Fellow (to Dec 2010)

James Beeson, MBBS, BMedSc, PhD, FAFPHM (from Dec 2010)

Personal Assistant to Centre Head: Susan Collins (to Apr 2010), Andrea Eakins (from Apr 2010)

APOSTOLOPOULOS LABORATORY – IMMUNOLOGY AND CANCER VACCINE

Head

Vasso Apostolopoulos, BSc(Hons), PhD, Adv Cert Prot Cryst

Post-doctoral Fellows

Kuo-ching Sheng, BSc(Hons), PhD (to Feb 2010)

Stephanie Day, BSc(Hons), PhD

Clinical Associate

Christine McDonald, MBBS, PhD, FRACP

Visiting Professors

John Matsoukas, BSc, MSc, PhD

Lily Stojanovska, BSc, MSc, PhD

Students

Ying Ying Kong, BSc

Jennifer Perret, MBBS

Clinical Associate

Stamatis Vassilaros

BEESON LABORATORY – MALARIA: CLINICAL AND TRANSLATIONAL RESEARCH

Head

James Beeson, MBBS, BMedSc, PhD, FAFPHM (from Dec 2010)

Group Leader – Malarial Epidemiology

Freya Fowkes, BSc(Hons), MSc, DPhil (from Dec 2010)

Post-doctoral Fellows

Damien Drew, BSc(Hons), PhD (from Dec 2010)

Mirja Hommel, Dr Rer Nat (PhD) (from Dec 2010)

Linda Reiling (from Dec 2010)

Jack Richards, MBBS, FRACP, MPH, DTM&H (from Dec 2010)

Visiting Scientist

Uli Terheggen, MBBS, Dr. Med, MPH&TM, Specialist in Pediatrics, Research Fellow of the Swiss National Science Foundation (from Dec 2010)

Research Assistant

Christine Langer, BTA (from Dec 2010)

Students

Michelle Boyle (from Dec 2010)

Jo-Anne Chan (from Dec 2010)

FFRENCH LABORATORY – VIRAL IMMUNOLOGY

Head

Rosemary Ffrench, BSc(Hons), PhD

ImmunoMonitoring Facility Coordinator

Kylie Goy, BSc (Hons)

Project Manager

Harini de Silva, BSc(Hons), PhD

Laboratory Scientist

Amanda Brass, BA, BSc, MSc, PhD

Research Assistant

Devy Santoso, BMS(Hons)

Student

Jacqueline Flynn, BSc(Hons), MBiotech

GAVIN LABORATORY – INNATE AND ADAPTIVE IMMUNITY

Head

Amanda Gavin, PhD, ARC Future Fellow (from Aug 2010)

GERONDAKIS LABORATORY – INTRACELLULAR SIGNALING AND GENE EXPRESSION

Head

Steve Gerondakis, BSc(Hons), PhD, NHMRC Principal Research Fellow

Senior Post-doctoral Fellows

Ashish Banerjee, BSc(Hons), PhD

Raffi Gugasyan, BSc(Hons), PhD (to Nov 2010)

George Grigoriadis, BSc(Hons), PhD, MBBS(Hons)

Ajithkumar Vasanthakumar, BSc, MSc, PhD

Senior Research Assistant/Laboratory Manager

Raelene Grumont, BSc(Hons), MSc

Laboratory Animal Care Technician

Sonia Guzzardi

Students

Elisha Horat, BSc (to Nov 2010)

Isaac Han, BSc

GUGASYAN LABORATORY – LYMPHOCYTE BIOLOGY

Head

Raffi Gugasyan, BSc(Hons), PhD (from Nov 2010)

Student

Elisha Horat, BSc (from Nov 2010)

HOGARTH LABORATORY – HELEN MACPHERSON SMITH TRUST INFLAMMATORY DISEASES

Head

P Mark Hogarth, PhD, NHMRC Senior Principal Research Fellow

Post-doctoral Fellows

Bruce Wines, PhD

Maree Powell, PhD

Peck Sze Tan, PhD

Angela Cendron, PhD

Bock Lim, PhD

Janine Stubbs, PhD (from Sept 2010)

Research Assistants

Soong Ling, BSc(Hons)

Halina Trist, BSc

May Lin Yap, BSc(Hons)

Eva Orłowski, BSc(Hons)

Student

Kerry Ko, BBiomed, BSc(Hons)

Clinical Associates

Ross Baker

Russell Buchanan

Frank Ierino

Research Associates

Mal Brandon

Dennis Burton

John Cambier

Peter Colman

Henry Metzger

Emeritus Professor

Ian F C McKenzie, AM, MD, PhD, FRACP, FRCPA

O'KEEFFE LABORATORY – VIRAL IMMUNE RESISTANCE

Head

Meredith O'Keeffe, PhD

Research Assistant

Ben Fancke

PIETERSZ LABORATORY – BIO-ORGANIC AND MEDICINAL CHEMISTRY

Head

Geoffrey A Pietersz, PhD

Staff

Martha Kalkanidis, PhD (to Jun 2010)

Owen Proudfoot, PhD

Choon Kit-Tang, PhD (to Jul 2010)

Jennifer Hsu, PhD

Sandra Esparon, BSc

RAMSLAND LABORATORY – STRUCTURAL IMMUNOLOGY

Head

Paul A Ramsland, PhD, NHMRC Career Development Award

Staff

William Farrugia, MSc

Student

Maribel Bartley



Centre for Immunology Laboratory Heads, page 34.

(L-R): Dr Geoff Pietersz, Dr Raffi Gugasyan, Professor James Beeson, Professor Mark Hogarth (Centre Head), Professor Steve Gerondakis, Dr Amanda Gavin, Dr Meredith O'Keeffe, Dr Freya Fowkes, Dr Paul Gilson, Associate Professor Rosemary Ffrench.

Absent: Dr Paul Ramsland, Professor Vasso Apostolopoulos.



Centre for Population Health

mission

The Centre for Population Health (CPH) improves the health of the community by conducting high quality, policy relevant and innovative research into major public health problems associated with infectious diseases, drug use and related behaviours. Specific interests include HIV, hepatitis C, sexually transmitted infections, malaria, tuberculosis, drug and alcohol misuse and justice health – all serious health concerns in Australia and in the Asia and Pacific regions predominately affecting highly vulnerable populations. CPH also develops effective mechanisms to communicate with these populations about how to improve their health. The problems and populations which the CPH addresses are highly challenging, but this makes our work equally rewarding and important.

Overview

The Centre for Population Health (CPH) implements novel, multidisciplinary scientific programs that use cutting-edge epidemiology, high quality laboratory science, excellent clinical and social research, and strong public health principles to address major health problems in our region.

Working with highly vulnerable populations, CPH undertakes research that helps to better understand priority diseases and their transmission and ecology, discovery science with potential for longer term benefits such as therapeutics and vaccines, and health systems research that directly influences health policy. Some areas of specific interest are described below.



Alcohol and other drug use is a major public health issue costing Australia an estimated \$55 billion per annum. CPH studies the nature and extent of alcohol and other drug use over time with a view to developing effective policy responses.

Hepatitis C is associated with considerable mortality and morbidity, affecting around 200 million people worldwide. Working closely with people who inject drugs and collaborating with virologists, immunologists and mathematical modellers, CPH's hepatitis C research focuses on improving understanding of hepatitis C virus infection and transmission, with the ultimate aim of developing a hepatitis C vaccine. As well, CPH undertakes research to improve the outcomes of hepatitis C treatment, particularly among current injecting drug users.

An estimated 33 million people are living with HIV and in Australia new diagnoses continue to increase. CPH aims to reduce HIV transmission by developing and managing innovative surveillance systems for Victoria and Australia, and by undertaking research involving at-risk groups.

Malaria is a major global public health problem, causing one billion malaria episodes each year and more than two million deaths, predominantly in young children in the poorest communities. The Centre's malaria program extends from basic laboratory research through molecular epidemiology to large field trials of anti-malarial therapy in children in Papua New Guinea, all aimed at providing evidence for more effective control and treatment.

Chlamydia trachomatis is a sexually transmitted infection predominately affecting young heterosexual men and women, with over 74,000 new notifications in Australia in 2010. If untreated, chlamydia infection causes pelvic inflammatory disease and tubal infertility in women. CPH aims to reduce the impact of chlamydia by reducing transmission and increasing the number of young people tested and treated. As part of this work CPH is exploring the use of new technologies such as mobile phones and social networking websites for health promotion.



Hit and miss: A study of post-release support. Limited access to services on release from prison can lead to a return to crime.



Centre for Population Health Group Heads

Scaling up diagnosis and treatment of drug-resistant tuberculosis in Khayelitsha, South Africa

Tuberculosis bacteria, resistant to commonly used antibiotics, are causing increasing morbidity and mortality in resource-poor settings. Although different drugs can be used to treat drug-resistant tuberculosis (DR-TB), treatment continues for almost two years, side effects are common and treatment outcomes remain poor, particularly among HIV-infected people. There are also significant **problems with access to diagnosis** for DR-TB.

Helen Cox, a Centre for Population Health epidemiologist, has spent the last few years in Cape Town, South Africa working to improve diagnosis and treatment of DR-TB in the large township of Khayelitsha. Working collaboratively with Médecins Sans Frontières (MSF), Helen has helped to integrate DR-TB diagnosis and treatment into the primary care health system through a more patient-centred approach. To date, key successes include diagnosis and treatment of approximately half of the estimated cases in Khayelitsha, a dramatic improvement on the three percent global figure.

The program demonstrates that most patients with DR-TB can be diagnosed and treated at local primary care clinics, avoiding expensive hospitalisation. It is hoped that the model of care demonstrated in Khayelitsha will prove replicable in other settings and enable urgently needed global scale up of diagnosis and treatment.

A broad-based health intervention for adult ex-prisoners

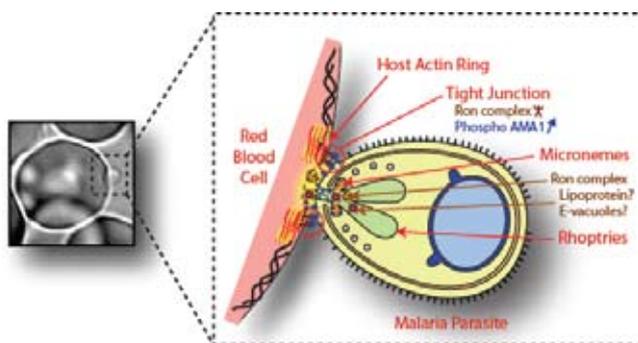
The *Passports* project (*Passports to advantage: health & capacity building as a basis for social integration*) is led by **Stuart Kinner**, head of the Centre for Population Health's Justice Health Research Program. *Passports* is the world's first randomised clinical trial (RCT) in its field, and aims to evaluate the impact of an innovative health and psychosocial intervention package for adult prisoners being released to the community in Queensland. Major research foci are post-release physical and mental health and risk behaviours, access to and use of health services, and the incidence and timing of recidivism.

Baseline data collection commenced in 2008 in four prisons in south-east Queensland, and during 2009 expanded to include three more prisons – two in Townsville and one in Cairns. Over **1,300 prisoners were recruited into the cohort**, and are being re-interviewed approximately one, three and six months post-release. The project continues to be the subject of invited presentations at national and international meetings, and was the only international presentation at a juvenile justice policy briefing in Washington DC. We anticipate that *Passports* will lead to significant gains in our knowledge of how to improve the health of Australian ex-prisoners – a large and growing population.

Malaria

Symptomatic malaria is caused by large-scale infection of human red blood cells with tiny Plasmodium parasites that invade, grow and replicate within these cells.

Scientists working in the **Gilson/Crabb Malaria Laboratory** are particularly interested in how malaria parasites attach to and then invade red blood cells because the more this is understood, the better placed we will be to develop new drugs and vaccines that block invasion. They have been studying a parasite surface protein called AMA1 that helps the parasite strongly and irreversibly attach to the red blood cell surface, and have discovered that the short stubby tail of AMA1 that pokes back inside the parasite needs to be modified by one of the parasite's kinase enzymes before red blood cell invasion will occur. If the AMA1 tail modification is blocked, then the parasites can attach to **but cannot invade the red blood cell**; this is a novel and important finding and was recently published in a high profile parasitology journal. We believe that the modification of the AMA1 tail is part of a complex chain of signal transduction events that help parasites make decisions about which cell types to invade and when.



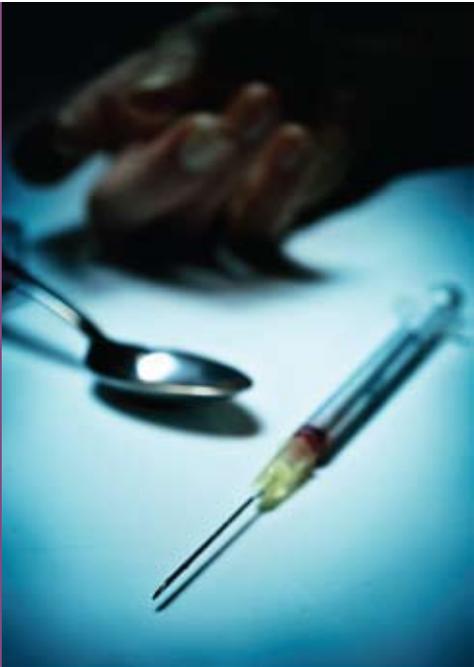
IDRS/EDRS

Since 2008, the Burnet Institute has run the Victorian arms of the Illicit Drug Reporting System (IDRS) and the Ecstasy and Related Drugs Reporting System (EDRS) in partnership with the National Drug and Alcohol Research Centre. This work provides important surveillance information on **patterns of drug use and related harms** in Victoria using standard methods that have been applied since 1997 (IDRS) and 2003 (EDRS). These methods include a survey of people using particular types of drugs, interviews with key experts and analysis of secondary data sources. The importance of these systems in picking up new trends in drug use is highlighted by the 2010 Victorian EDRS, through which a large increase in the use of the drug mephedrone (street name: miaow miaow) was documented for the first time in Victoria. This drug emerged in the context of an apparently declining ecstasy market, but has a series of side effects that need close and careful monitoring.

Hepatitis C

Our research into the hepatitis C virus (HCV) continued largely through our ongoing *Networks* study and the development of models for the integrated management of hepatitis C in the community. Since commencing in 2005, *Networks* researchers have followed a cohort of people who inject drugs (the major risk group for HCV infection in Australia) with the primary aim being to **better understand the transmission of hepatitis C**. This unique cohort continues to produce data of interest to epidemiologists, immunologists, virologists, mathematical modellers and network modellers; over a dozen publications

have come from this work, including some in **high-impact peer-reviewed journals**. Important findings include the identification of very high rates of hepatitis C reinfection and associations between the probability of an individual being infected with hepatitis C and the nature of their injecting network. Since it was established, the *Networks* cohort has generated five national-level and three international collaborations aimed at improving our understanding of various aspects of the hepatitis C virus, work that is informing the development of a hepatitis C vaccine and harm reduction strategies.



“ Burnet and its collaborating partners established the Centre for Research Excellence in Injecting Drug Use aimed at reducing the problems associated with injecting drug use. ”

Centre for Research Excellence in Injecting Drug Use

The Centre for Population Health successfully applied to the NHMRC to establish a Centre for Research Excellence in Injecting Drug Use (CREIDU). CREIDU brings together Australia’s leading researchers on injecting drug use (IDU), along with partners and key experts from the non-government sector and policy sectors, to generate new evidence on ways to ameliorate the health and social burden of IDU. With a focus on **translating research into policy and practice**, CREIDU aims to reduce the key harms associated with IDU by identifying ways to reduce blood-borne virus transmission (particularly hepatitis C), prevent overdoses, and improve justice health and psychiatric health.

With \$2.5 million funding over five years, CREIDU will support research across disciplines such as mental health, justice health and infectious diseases, enabling researchers to take a holistic approach to IDU-related health issues. CREIDU will fund pre-and post-doctoral scholars who will work with and receive supervision and mentoring from multiple research groups and community-based organisations within the CREIDU to ensure they take a multidisciplinary approach. Also, the CREIDU will **support and coordinate diverse prospective databases** being produced by the various CREIDU research groups, notably a uniquely detailed examination of the health and social consequences of IDU linked to hospitalisation, morbidity and other data.

Informing HIV prevention

Burnet Institute has conducted HIV surveillance for the Victorian Department of Health since 1986. In 2010, after four years of historically high annual HIV notifications, new diagnoses of HIV in Victoria declined by 15 percent to 228. In addition, an increasing proportion of these notifications were newly acquired in the past 12 months. These data suggest that health promotion activities designed to increase HIV testing (an important prevention tool), particularly among gay men, may be having an impact. This outcome is supported by Burnet’s evaluation of HIV prevention initiatives in Victoria. In a report provided to the Victorian Government in 2010, Burnet staff outlined their findings that **recent social marketing campaigns were successful** in raising gay men’s awareness of the importance of testing and prompted a meaningful proportion to present for HIV testing. Burnet’s sentinel surveillance data also showed a significant increase in monthly HIV testing rates among gay men attending high caseload clinics over the campaign period.



Data suggests that health promotion activities designed to increase HIV testing, particularly among gay men, may be working.

Centre for Population Health: our staff and students

CENTRE HEADS: **Margaret Hellard**, MBBS, FRACP, FAFPHM, PhD
John Reeder, MSc, PhD

Office Manager and Personal Assistant to Centre Heads: **Liz Nicol**

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John Reeder

NHMRC Senior Research Fellow

Margaret Hellard

NHMRC Career Development Award

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Associates

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MHealthSci, PhD

Anne Mijch, MBBS, FRACP



Centre for Population Health Group Heads, page 40.

(L-R): Dr Stuart Kinner, Louisa Degenhardt, Freya Fowkes, Associate Professor Margaret Hellard, Associate Professor Paul Dietze, Dr Mark Stoové, Professor John Reeder.



Centre for International Health

mission

Burnet Institute's Centre for International Health leads practical action to improve the health of people in low-income countries. Our expertise spans HIV prevention and care, women's and children's health, sexual and reproductive health, drug use, primary health care, strengthening national health systems, and education about all these fields. Our approach is based on innovation, inquiry and influence. We work with local communities, governments, the UN system and international organisations including Australia's development agencies. We have overseas offices in Papua New Guinea, Indonesia, Lao PDR, Myanmar (Burma), China (including Tibet), Mozambique and Thailand (Bangkok) and also work in other countries through Burnet's local partners.

Overview

The Centre for International Health (CIH) experienced a year of consolidation. Financial turnover and staff numbers remained similar to 2009 levels and our core work continued to take place through country programs in Papua New Guinea (PNG), Indonesia, Lao PDR, China (including Tibet), Myanmar (Burma), Mozambique, the Pacific and Sri Lanka. We continued to manage several multi-year projects as well as being a technical partner in a new five-year activity in Indonesia – *Scaling up for Most At-Risk Populations* – a USAID-funded HIV prevention project.

Following are some further highlights from 2010:

The Centre was commissioned to undertake a number of critical short-term assignments in strategy development, program design, and evaluation. CIH staff members were engaged to help develop: HIV strategic plans in **Fiji, Solomon Islands, Federated States of Micronesia, and Marshall Islands**; a national plan to prevent and control emerging infectious diseases in **Vietnam**; and a national health promotion policy in **Samoa**. We led a review of the Australian-funded Pacific Malaria Initiative and are in the process of designing a second phase of the program. Our staff also designed a new Clinton Foundation program focusing on AIDS in children in **PNG**.

Burnet staff were active in a number of regional and global **harm reduction** networks as well as providing technical assistance to the Tanzanian Government to reduce the HIV risks associated with the escalating wave of injecting drug use in **Zanzibar**. The Centre's HIV prevention work included an innovative sexual network modelling study, in collaboration with Burnet's Centre for Population Health (CPH), of bisexual men in **Vientiane and Hanoi**.

Staff from our Myanmar office at the 3DF (Three Diseases Fund) 2010 Annual Review meeting.



As a partner in the AusAID-funded **Women's and Children's Health Knowledge Hub**, CIH undertook research to: analyse the barriers and enablers to adolescents accessing sexual and reproductive health information and services in **Vanuatu**; develop competencies for community health workers to provide quality services to adolescents; identify effective community interventions to save the lives of mothers and babies; increase the counselling and communication skills of maternal care providers; and to assess health systems interventions for improving access to maternal and child health services in urban areas of the **Philippines**.

Burnet co-hosted with AusAID a **Roundtable** on developing a maternal and child health strategy chaired by the Hon Bob McMullan, the then Parliamentary Secretary for International Development, and attended by NGOs and health researchers. Burnet also hosted a technical consultation sponsored by the World Health Organization (WHO), on **Best Practices and Tools for Preventing Perinatal Transmission of Hepatitis B**. This was due in part to recognition of Burnet's innovative work in piloting community-based perinatal health interventions in Indonesia and PNG.

Several CIH staff members were on the organising committee for the annual **UN-DPI NGO conference** held in Melbourne in September, only the third time in 63 years that it has been held outside New York. Burnet also co-sponsored a conference workshop on **The Unfinished Agenda of Sexual and Reproductive Health Rights**. Burnet hosted 16 participants from India, Mongolia, Sri Lanka, Indonesia, Fiji and Malaysia for a three-week program on **healthy ageing**, with the aim of establishing a Healthy Ageing Research Hub for Asia and the Pacific. **Mike Toole**, Head of the Centre, was appointed by the director-general of the World Health Organization to the Independent Monitoring Board of the **Global Polio Eradication Initiative**.



Centre for International Health Management Team

Myanmar (Burma)

Burnet has successfully completed the first year of co-implementation with three community-based partners to provide **antiretroviral therapy to HIV-positive people** with clinical AIDS. **Dr Dan O'Brien** (Technical Advisory and Reference Group member) visited the project in January 2011 to monitor progress. In his trip report, Dr O'Brien commented that the level of competence, commitment and dedication of the teams was very high and that the early outcomes of patients on treatment are good.

In collaboration with MINA (Myanmar Interfaith Network on AIDS) Burnet co-facilitated workshops to develop a common platform among religious organisations to respond to HIV and AIDS in communities; four religions reached a consensus on caring for people living with HIV with loving kindness and preventing stigma and discrimination against vulnerable people.

To commemorate **World AIDS Day**, Burnet in conjunction with Myanmar Anti-Narcotics Association (MANA) hosted an event named 'HIV/AIDS Knowledge Quiz with Celebrities and Entertainment'. It was held at City Centre, a shopping mall in the heart of Yangon city, surrounded by Myanmar's oldest yet still modern market Bogyoke Aung San Market, the Yangon General Hospital, and Theingyi Zay, the largest wholesale and retail market halls in Yangon. The event attracted an audience in more than 1,000 people from all walks of life. It was the first-ever public event for any international NGO in Myanmar to receive such a strong response.

China (including Tibet)

China-Australia Health and HIV/AIDS Facility (CAHHF) is now in its fourth year of implementation. The continued tightening of CAHHF's strategic focus towards funding policy-oriented research relevant to China's current health reform process has ensured the Facility remains highly relevant to China's national health priorities. A review by senior Chinese academics acknowledged the contributions to policy development in China, saying that, *"CAHHF is one of the most influential international cooperation projects implemented in China ... The close interaction between activity implementers and policy makers has greatly facilitated the transfer of research results into policy, and helped maximise the engagement of policy makers."*

CAHHF has made a substantial contribution to facilitating relations between AusAID and the Chinese Ministry of Health (MOH). The Chinese Monitoring and Evaluation Advisor found that the MOH were forthcoming and positive in their feedback about CAHHF and the Australian model of health aid delivery. The active engagement of the MOH in CAHHF's processes provide evidence of this. As a result, this particular Australian aid has been able to exert influence well beyond the dollars expended.

The AusAID-funded **Tibet Health Sector Support Program (THSSP)** concluded in June 2010 after six years of operation having successfully contributed to significantly strengthened health systems in the Tibet Autonomous Region of China, in areas as diverse as HIV testing and counselling, STI testing and treatment, development of clinical management protocols, strengthened approaches to health promotion and outreach, and the first prevalence survey in the region covering HIV and other sexually transmitted infections.

Burnet successfully negotiated the continuation of the Cooperation Agreement that allows us to continue our important work in Tibet. Development, pre-testing and production of new Information Education and Communication (IEC) materials for HIV and STI prevention continues. A comprehensive program was conducted in Lhasa and Duilong Dechen for World AIDS Day. Burnet staff collaborated with other agencies for a community awareness stall on busy Lingkor Beilu, while rural activities in five villages drew nearly 1,000 people to community presentations from Burnet staff, community leaders and the project's peer educators.

Indonesia

In May 2010, Burnet, along with lead organisation US-based Training Resources Group (TRG), and the other consortium members, were successfully awarded a five-year USAID project *Scaling Up for Most-At-Risk Populations: Organizational Performance (SUM II)* which focuses on improving organisational performance to expand coverage of effective, integrated HIV interventions that lead to substantial and measurable behaviour change among most-at-risk populations, such as sex workers, men who have sex with men, and people who inject drugs.

Two programs concluded in 2010, including *Capacity building for Local Responses to HIV Among Injecting Drug Users in Bekasi, West Java*. The program evaluation showed that there is a marked increase in awareness of health risks and willingness to adopt harm reduction measures; however, there remains a reluctance to access public health services. Our program to strengthen the HIV response in Aceh Province also came to an end.

With support from Perpetual Trustees and other donors, Burnet has been able to increase awareness and understanding around sexual and reproductive health and rights especially amongst adolescents. Burnet is increasingly acknowledged as being a technical leader in areas related to HIV, including care, support and treatment (CST), and sexual and reproductive health. Through our HIV mainstreaming work with a number of AusAID-funded non health-related bilateral programs there is now an increased awareness of HIV and AIDS as a development issue among local organisations in four provinces.

Sri Lanka, Vietnam and Malaysia

Burnet maintains its presence through partnerships in a number of other countries in the Asia and Pacific Regions including: Sri Lanka (improving the health and well-being of elders); Vietnam (harm reduction and a sexual networking study); and Malaysia (harm reduction).

Mozambique

For more than 11 years, Burnet's work in Mozambique has focused on building the capacity of local non-government organisations that provide vital services to very poor communities grappling with the impact of the HIV epidemic. These services typically include: counselling; home-based care for the sick; and care and support of orphans and other vulnerable children. Capacity building is a much-used term and can have different aims and involve a diverse range of approaches. Burnet has taken an intensive approach to and worked closely with 30 organisations in Manica Province to maximise the potential for positive change. We have assisted these local organisations to assess and prioritise their needs. We established and educated a local team to train and mentor the 30 organisations in a range of topics, according to their needs. We also provided a range of other capacity development mechanisms to complement the training and mentoring.

An AusAID-funded **Innovations Grant** supported a program that assessed and strengthened the skills of local midwives at the district and community levels. In addition, Burnet facilitated a series of meetings between Manica provincial health officials and their counterparts across the border in Manicaland Province of Zimbabwe to discuss health issues of common concern.

Papua New Guinea (PNG)

Burnet completed its management of the AusAID-funded *Tingim Laip* HIV prevention project and entered a new phase including relocation of headquarters to the School of Medicine and Health Sciences, University of PNG. We look forward to forging a strong relationship with the University as the basis for future academic collaboration, staff and/or student exchanges, joint research and project activities and proposals, and exchange of information.

The East New Britain Sexual Health Improvement Project continues to strengthen the capacity of local services and communities to prevent and treat sexually transmitted infections. Positive outcomes associated with this project, include: reported shifts in religious and cultural beliefs and values relating to sexual health issues; strengthened relationships between health workers and community advocates (Stret Tokers); and individual behaviour change, such as health care-seeking behaviour, condom use and a reduction in the number of sex partners.

Our *Improving Immunisation and Newborn Survival at Aid Post Level (IINSP)* project resulted in the recognition of our Project Coordinator, **Lester Bisibisera**, winning the Senior Prize in Clinical Research for his IINSP entry in The Alfred Research Week Poster Display. WHO provided funding to conduct a cost-effectiveness study of IINSP and strengthen integration of hepatitis B into local management systems. Furthermore, the Australian public demonstrated great interest in the work of the Burnet Institute in PNG during the launch of our Healthy Mothers, Healthy Babies Appeal. Burnet's Christmas Appeal generated more than \$50,000 for the project.

Lao People's Democratic Republic

During its 12 years of operations, Burnet's Lao office has developed a niche area of work in peer education with men who have sex with men, being one of only three organisations in the country that conduct HIV-prevention activities particularly targeting these men. Further peer education programs also include sex workers and youth, funded by the Australian government, Global Fund and other donors.

A major focus of effort in 2010 was a large regional infrastructure initiative funded by the Asian Development Bank. This project has developed provincial and district HIV prevention teams consisting of representatives from different government sectors at the provincial/district levels that are responsible for project implementation. This has proved to be a highly successful approach. The teams work with youth in villages along a new highway

Lao women and children benefit from Burnet's maternal and child health projects.



Growth monitoring, Lao PDR.

and also with private sector employees, most notably in a casino and a coal mine, as well as mini-van and truck driver associations. Initial findings show a strong increase in HIV knowledge across all target settings.

Funded by an Australian Government development research grant, Burnet is conducting unique and innovative research that identifies network maps of sexual relationships in Vientiane and demonstrates how even individuals deemed at being in low risk categories (e.g. heterosexual women) are directly linked to high risk categories such as men who have sex with men.

Pacific Program

Burnet engaged with a number of Pacific countries through operational research and capacity development in the fields of drugs and alcohol, adolescent sexual and reproductive health, and infectious diseases, including HIV and STIs. The Pacific Drug and Alcohol Research Network (PDARN) maintained its research capacity-building focus, and in February the Australian National Council on Drugs launched Burnet's report *Situational Analysis of Drug and Alcohol Issues and Responses in the Pacific 2008-09* contributing to broader understanding of regional issues.

The Women's and Children's Health Knowledge Hub partnered with Vanuatu-based NGO, Won Smol Bag, to conduct operational research exploring barriers to accessing sexual and reproductive health services. Discussions with the Government of Vanuatu regarding use of research findings for future programming are ongoing. Burnet continued to support HIV programming through partnerships with regional agencies, such as the Secretariat of the Pacific Community, governments, and civil society in five Pacific countries reviewing, and developing national strategies to respond to HIV and STIs including expansion of our work in Micronesia. Preliminary work to establish research on HIV prevalence in Fiji's prisons was completed.

Centre for International Health: our staff and students

AUSTRALIA MELBOURNE

Head

Mike Toole, MBBS, BMedSc(Monash), DTM&H (London)

General Manager

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Kelly Xiao, BCom(Accounting), BEng (Environmental) (Hons), Melbourne

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Fellow, HIV and Development Specialist

Clare Murphy, RN, BEdSt, MPH&TM, MHSc

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Elissa Kennedy, MBBS, MPH(Intl Health)

Fellow, Research Officer

Lucina Schlich, BA(Asian Studies) (ANU) – (Vietnamese), Monash LLM (Juris Doctor) ongoing

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International Programs Lead Accountant

Kevin Hodgson, BSc(University of Durham), MSc(University of London), MEc(University of Sydney), ACA, CA (from Apr)

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Mary-Ann Nicholas, BSc in European Management Science (German)

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Program Director, Mozambique, Senior Fellow and Program Quality and Learning

Robyn Whitney, BA/SocSc(Hons) (La Trobe), Postgrad Cert in Assess & Eval

Project Manager, Myanmar (Burma)

Lia Burns (from Jul)

Program Manager, Tibet, Health and Development Specialist

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Dean Garreffa, BComm(LaTrobe), CPA (to Mar)

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Dino Asproloupos, BA(Leisure Services) (UVIC), IMBA(International Strategy)(York) (to Oct)

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Bridget Gardner, MHS, GradDipHealth Education, BA

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Sieyin Phung, BBus

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Chris Hagarty [based in Melbourne]

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I Gusti Ayu Kade

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Ika Christi Susanti (from Sep)

Ni Luh Putu Ariastuti, Medical Doctor

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Tintin Rejeki, Bachelor Degree in Communications (until Mar)

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Southiphone Phomla, BSc(Laos)

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Philippa Sackett, BSc(Psychology), MA(Human Rights)

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MOZAMBIQUE MAPUTO

Country Representative

Jose Carlos Lopez Seisdedos, Degree in Medicine and Surgeon, Master of International Development and Cooperation (from Apr)

Finance Manager

Benjamim Antonio, BA, Bachelor of Business Management

Office Assistant

Ana Matlombe

Project Assistant

Edna Sandra Reis

CHIMOIO

Regional Coordinator

Alfeu Manuel Muchine, BA(Economics)

Accountant and Office Assistant

Victorino Grino Durbek

Driver

Vicente Fernando Silva

MYANMAR (BURMA)

Country Representative

Karl Dorning, DipT, BEd(La Trobe)

Administration Assistants

Min Htut Pike, BSc (from Jun)

Naw Cecilia Aye, LLB, M Dev S(Yangon)

Administration & HR Coordinator

Mai Jubilee Aung, BA(Psy)/BRE(Rel Edu)/MBA, (from Mar)

Administration Officer

Nee Sin Thwet Aye, BA(English), LCCI, DipBusAdmin(Thames)

Communication Officer

Soe Lin Htut, BCTech (from Jul)

Counsellor

Zar Ni Tin, BSc(Chem), DipAppPsycho (from July)

Zaw Zaw Naing, B.Arg.Sc (from Apr)

Driver/Logistics

Naing Htoo Zaw (a) Zaw Zaw

Saw Winter J Pan Poe, BA(Hist) (from Aug)

Finance Coordinator

Cho Cho Mar, BCom(Institute of Economics, Yangon), CPA (Myanmar Accountancy Council)

Finance Manager

Aung Lwin, BA(Hist) ACCPAC

Finance Officers

Aye Thet Khine, BA(Business Management) (from Mar)

Hnin Nandar Win, BCom(Hons), DA(UK), ACCA

Wintwar Tun, BCom, AGTI (Civil)

HIV Technical Advisor

Kelly Macdonald, MSc Reproductive & Sexual Health(London), MSc Rural Planning & Dev(Ontario), BA Int Dev Studies(Calgary)

Housekeepers

Ni Ni Mar

Regina (from Feb)

San San Aye

HR & Admin Assistant

Thang Cin, BScSc(from Sep)

HR Officer

Aye Myat Soe, BA(Bus Management), LCCI

IT Officers

Lwin Min Ko, BScSc(Computer Science)

Myo Min Min Htike, BSc(Physics)

Logistics Officer

Thida Win, BA(Ec)

Medical Officer

Wut Yi Soe, MBBS (from Apr)

Centre for International Health: our staff and students

Nurses

Zin Mar Myint, BSc(Physics)

Nant May Thazin, DipNursing (from Apr)

Procurement Officer

Aye Nandar Hlaing, BPharm, BA(Eng)
(from May)

Program Coordinator

Phone Myint Win, MBBS (Yangon)

Project Managers

Aung Min Thein, BA(Psy)

Aye Aye Myint, MBBS, MPH

Khin Pa Pa Naing, MBBS(Yangon),
MPH(Bangkok)

Nang Pann El Kham, MBBS(Yangon),
MPH(Bangkok)

Zaw Min Oo, MBBS, MPH (from Dec)

QLMA Coordinator

Mon Mon, MBBS, MCH

QLMA Program Officers

Aung Ko Ko, MBBS (from Jul)

Thandar Aye, MCSc

Yadanar Khin Khin Kyaw, BSc(Hons),
DipBus

Senior Advisor

Myint Su, MSc(Marine Ecology),
MSc(Zoology)

Senior Technical Officers

Hla Htay, MBBS (Yangon), MPH
(Bangkok)

Htar Htar, BSc(Mawlamyaing), DipAcc
(London)

Tin Aung Win, BVetSc(Inst of Animal
Husbandry & Science, Yangon), DipFood
Tech(Yangon Inst of Tech)

Tin Tin Mar, BSc(Zoology), Master of
Management in Development
Management

Technical Coordinators

Kyi Kyi Ohn, MBBS

Kyu Kyu Than, MBBS, MMedSci
(from Oct)

Technical Officers

Aung Myint Than, MBBS(Yangon), PhD

Htun Htun Lynn, BNSc(Genetics)

Htun Naing Win, BA(Geography)

Khin Hnin Oo, MBBS(Yangon)

DipApplied Psychology(Yangon)

Mi Mi Aung Khin, MBBS(Yangon), MA

Nay Myo Aung, LLB

Ne Chye Thwin, BA(Ec), AGTI

Pyae Phyo Aung, MBBS (Yangon)

Sai Aung Kyaw Myint, BA(Business
Science)

Wai Lin Kyaw, BA(English), Dip Dev
Studies, Dip Social Work, Dip English

Yin Yin Minn, BA(Ec), Dip in
Development Studies (from Aug)

Zaw Thein Oo, MBBS(Yangon)

Technical Officers (Education)

Khaing Thandar, MBBS (from Aug)

Saw Min Thu Oo, MBBS (from Sep)

Technical Officer (Harm Reduction)

Pwint Phyu Phyu, MBBS (from Aug)

Technical Officer (Psychosocial)

Thura Maung Aye, MBBS (from Jun)

Technical Specialist (Psychosocial)

Thet Tin Tun, MBBS (from Sep)

Technical Specialist (Harm Reduction)

Moe Thant, MBBS (from Jul)

Technical Support Coordinator

Wint Maw Thinn, MBBS(Yangon),
DipIT(Yangon)

PAPUA NEW GUINEA

Country Representative

Catherine Beecham (from May)

Project Manager

Jim Benn, BSocSc(Waikato), PG DipAcc
(Wellington), PG Dip Community
Development(Deakin) (to Aug)

Administration Assistants

Elizabeth Norman

Freda Joup (to Apr)

Jenna Rekon (to Aug)

Lillian Tau

Administration Manager

Berance Reuben (to Aug)

Community Engagement Workers

ENBSHIP

Ellen Kavang

Hadlee Supsup

Rebecca Gabong-Mano

Sakaia Luana

Drivers, Port Moresby

Harry Fong

Raymond Nambate

Finance Assistant

Naomi Vele

Finance Manager

Kathleen Waninara-Kema

Finance Officer

Bettie Matonge

Logistics Officer

Caroline Talei Bunemiga,
(to Aug)

National Manager

Ako Maniana

Office Assistant/Cleaner, Port Moresby

Inara Udia

Project Management Advisor

Stephanie Lusby

Program Manager

Lester Bisibierra

Project Officers

Bridget Taimbari (to Aug)

David Dena (to Aug)

Denys Waibauru (to Aug)

Hedwig Winjong

Jerimiah Konga (to Aug)

Joseph Mocke (to Aug)

Kevin Rompia (to Aug)

Morea Isaiah (to Aug)

Norman Bisai (to Aug)

Paul Weriyai (to Aug)

Rose Mauyet (to Aug)

Simon Kange (to Aug)

Regional Coordinators

Joanne Ganoka (to Aug)

Judy Tokeimota (to Aug)

Team Leader

Geraldine Wambo

Technical Advisor

Pilly Mapira

THAILAND

Asia Regional Representative

Brad Otto, BA(Denver)



**Centre for International Health
Management Team, page 46.**

(L-R): Bridget Gardner, Dr Anne Ancia,
Professor Mike Toole, Dr Natalie Gray,
Chad Hughes, Marion Brown, Mark
Tennent.



Education and Capacity Building

Education and capacity building continued to be a major focus at the Institute in 2010. In fact an internal survey conducted by the Burnet Director in early 2010 revealed that 67 percent of activities carried out in the Institute could be considered education and/or capacity development.

As in previous years, Burnet continued to provide training in laboratory and social research, with students from Australian and international universities undertaking postgraduate independent research projects across all of our program areas. Burnet was also actively involved in the delivery of public health courses at undergraduate and postgraduate levels, through associations with Monash University, the University of Melbourne, Deakin University and La Trobe University.

As a result of recommendations in the 2009 review of Burnet's education program, the Director approved a new position of Education and Grants Management Officer, commencing in 2011.

This position will provide much-needed administrative oversight and support to the education program and potentially be a catalyst for the program to expand and grow in new directions.

Centre for International Health: Education Program 2010

Although overall student numbers were slightly down on 2009 (216 enrolments compared with 225 in 2009), the Centre for International Health's (CIH) education program had a successful year, delivering 15 postgraduate units. A new MoU with the Victorian Aboriginal Community Controlled Health Organisation (VACCHO) led to a stronger partnership and the return of the Aboriginal Health unit that had been cancelled in 2009. The unit attracted 23 students and the evaluation feedback was very positive.

As a result of a review of its Master of Public Health (MPH) program, 2010 was the final year of teaching the two University of Melbourne accredited units: *The global health impacts of drug use and harm reduction: controlling HIV in drug users*. These two units have been replaced with a single unit, *Alcohol and other drugs in society: a national and global perspective*, accredited by Monash University and delivered collaboratively by the Centre for International Health and the Centre for Population Health.

This unit is designed as a contemporary analysis of drug use in modern societies, exploring the risk and vulnerability of individuals and communities to licit and illicit drug use.

Above (L-R): Professor Steve Gerondakis, Associate Professor Rosemary Ffrench, Associate Professor Paul Gorry, Associate Professor Heidi Drummer, Marion Brown.

“A total of 54 Honours, Masters and PhD students were completing research degrees in the Centres for Immunology, Population Health and Virology.”



Burnet plays an important role in education, providing training in laboratory and public health research at the PhD, Honours and Postgraduate levels.



Representatives from Red Cross societies in Asia participate in a short-course on public health trends prepared by Burnet Institute for the Australian Red Cross.

As well as the postgraduate teaching, the Centre also conducted:

- (i) a three-day training course on *Public Health Trends* for ten Red Cross participants from five South-East Asian countries;
- (ii) an AusAID-funded Australian Leadership Awards (ALA) study tour. In July 2010, 14 Fellows (from seven countries) came to Australia to participate in the *Strengthening Public Health Leadership to Address Healthy Ageing* program.

The aims of the program were to facilitate the sharing of experiences, knowledge and skills between established leaders and mid-career professionals in relation to the rapidly emerging development issue of ageing; to develop a research agenda and collaborative research programs; and to develop a supportive regional network for advocacy, research and training. An informal network was successfully established during the program, with seven countries represented and a further nine expected to join the network in the near future;

- (iii) a five day fee-paying course on HIV in October. The course, *Effective community-based responses to HIV: an update on emerging trends and evidence*, attracted 13 students, 11 coming from PNG and the Pacific.

Research students

2010 was a year of expansion in the Education Program related to research student training at Burnet. A total of 54 Honours, Masters and PhD students were completing research degrees in the Centres for Immunology, Population Health and Virology.

An expanded recruitment drive, including a public Student Information Event and a new student booklet, attracted 14 new honours and six new PhD students in 2010. In addition we had several visiting scholars from international universities. The Research Students Committee, chaired by Associate Professor Rosemary Ffrench, conducts oversight and co-ordination of the Burnet research students program.

Burnet's student information evening is a great way for potential students to come and talk to our staff face-to-face about the programs on offer.



Research students *Continued*

Honours program

The Burnet Honours program, coordinated by **Associate Professor Heidi Drummer** and **Associate Professor Paul Gorry**, included 14 students working on research projects in malaria, HIV, HCV, arthritis and cancer. These students came from Melbourne, Monash, Deakin and La Trobe Universities and underwent research training in immunology, virology, and population health. The Burnet Institute also offered an advanced module for the honours degree at Monash University, which involved the students preparing a research poster from a published paper and explaining the findings to an audience of senior research scientists. The students did an excellent job and found this very useful training for a career in research.

The quality of the honours students and their training was demonstrated by the very high percentage receiving first class honours (more than 80%), and the fact that several were awarded prestigious scholarships to progress with PhDs in 2011, including **Elisha Horat**, **Katherine Harvey** and **Kieran Cashin**.

Elisha Horat was also the top student in her year in the B Biomed Sci(Hons) degree at Monash University, and was awarded the Nairn Prize as the top student in the Department of Immunology, and the Faculty of Medicine Postgraduate Excellence Award.

You will find further information about Burnet's Honours Program at www.burnet.edu.au/home/education

PhD program

In 2010 Burnet had 38 PhD students, working in both population health and laboratory-based research projects, and enrolled via Monash, Melbourne and RMIT universities. Approximately one quarter of the students were international, coming from Asia, the Middle East, Europe and Africa.

Their fields of research included use of social media for public health messages, molecular studies on HIV reservoirs in the brain, characterising the fusion mechanism in hepatitis C virus entry, influenza virus replication, characterisation of critical malaria proteins, and production of a vaccine for HCV.

The quality of our PhD students was attested to by the number of external awards and prizes our students received, including scholarships to attend international conferences (**Sarah Charnaud**, **Daniel Cowley**, **Vanessa Evans**, **Michael Roche**), prizes for presentations at national conferences and other local awards.

Judy Gold from Centre for Population Health was a state finalist in the '3-minute thesis' competition in science



Gregor Lichtfuss from Centre for Virology was a state finalist in the Ausbiotech student awards.

communication, and **Gregor Lichtfuss** from Centre for Virology was a state finalist in the Ausbiotech student awards.

There were a large number of PhD students submitting their theses in 2010, including **Eunice Yang**, **Ali Gorzin**, **Kitty McCaffrey**, **Jacqueline Flynn**, **Judy Gold**, **Daniel Cowley**, **Johanna Dean**, and **Hamed Gouklani**. PhDs were awarded to **Redmond Smyth** and **Sook San Wong**.

Members of the Research Students Committee 2010

The members of the Burnet Research Student Committee in 2010 were: Associate Professor Rosemary Ffrench (Chair); Dr Alyssa Barry; Associate Professor Melissa Churchill; Associate Professor Heidi Drummer; Associate Professor Paul Gorry; Dr Elizabeth Grgacic; Associate Professor Anthony Jaworowski; Dr Maree Powell; Dr Paul Ramsland; and Mr Michael Roche.

For further information regarding postgraduate research programs at the Burnet Institute, please visit www.burnet.edu.au/home/education or contact Associate Professor Rosemary Ffrench at ffrench@burnet.edu.au.

Awards and Prizes

Every year the Burnet Institute awards prizes in recognition of our staff and student achievements. Here are some of the highlights from the 2010 Burnet Institute Awards:

Fenner Award

The 2010 Fenner Award was presented to Burnet's Head of the Centre for Population Health, **Associate Professor Margaret Hellard**. Margaret was recognised for her outstanding leadership, innovation and contribution to the fields of research and public health.

The Fenner Lecture is presented by, and pays tribute to, a Burnet Institute staff member who has made a significant contribution to the Institute's vision and mission in the areas of medical research and/or public health.

Gust-McKenzie Medal

The 2010 recipient of the Gust-McKenzie Medal was **Associate Professor Paul Dietze**, Head of the Alcohol and Other Drug Research Group in Burnet's Centre for Population Health.

The Gust-McKenzie Medal is an early-mid career award for excellence in basic and/or translational research and public health open to employees of the Burnet Institute. Named after the founding Directors of the Burnet and Austin Research Institutes, this is one of the two most prestigious internal awards at the Institute, the other being the Fenner Award.

Edelmira Peregrino Go International Health Student of the Year Award

This award is given to the international health student who achieves the highest academic results in international health subjects in a given year.

The award is in honour of Edelmira Peregrino Go, (affectionately known as Mai Mai), one of the first students to complete the Master of Public Health (International Health), who died after a year-long battle with cancer in 2003. In 2010, the Edelmira Peregrino Go International Health Student of the Year was **Celeste Marsh**.

Travel and Publication Awards

The continued generosity of donors, the Harold Mitchell Foundation and the Miller Foundation, enables many of our scientists and researchers to travel internationally to support their work. The winners of the 2010 Travel and Publication Awards are:

Harold Mitchell Foundation Post-graduate Travel Fellowship: Open to a senior PhD student studying in any field of research (currently in at least their third year of full time study).

Winner: Michael Roche (Centre of Virology)

Harold Mitchell Foundation Post-doctoral Travel Fellowship: Open to a junior post-doctoral fellow studying in any field of research (with no more than five years full time postdoctoral experience).

Winner: Dr Lachlan Gray (Centre for Virology)

Miller Foundation Post-graduate Travel Award: Open to a PhD student for international travel studying in any field of research (applicants must be Australian nationals).

Winner: Brendan Quinn (Centre for Population Health)

Public Health Travel Award:

Winner: Rachel Sacks-Davis (Centre for Population Health)



Associate Professor Margaret Hellard (second from left), with her parents Dick and Elaine Hellard, her husband John Symon, and sister, Janine Hellard, congratulate her on winning the 2010 Fenner Award.

The Crofts Award:

Winners for 2010: Dr Peter Higgs and Dr Ben Coghlan for their publications:

Higgs P, Dwyer R, Duong D, Thach ML, Hellard M, Power R, and Maher L, *Heroin-gel capsule cocktails and grain injecting practices among ethnic Vietnamese in Melbourne, Australia*. International Journal of Drug Policy, 20 (4):340-346. (2009).

Coghlan B, Ngoy P, Mulumba F, Hardy C, Bemo VN, Stewart T, Lewis J, and Brennan RJ. *Update on mortality in the Democratic Republic of Congo: results from a third nationwide survey*. Disaster Med Public Health Prep 2009;3:88-96 (2009).

Burnet Institute Biomedical Publication Award:

This prize is awarded to the author(s) of a significant paper published in a high-impact journal.

Winners for 2010: Dr Melissa Churchill and Dr Paul Gilson for their publications:

Churchill M, Wesselingh S, Cowley D, Pardo C, McArthur J, Brew B and Gorry P. *Extensive Astrocyte Infection is Prominent in Human Immunodeficiency Associated Dementia*. Annals of Neurology (2009).

de Koning Ward T, **Gilson P**, Boddey J, Rug M, Smith B, Papenfuss A, Sanders P, Lundie R, Maier A, Cowman A and Crabb B. *A newly discovered protein export machine in malaria parasites*. Nature (2009).

Dr Tony Stewart presenting award to Celeste Marsh - 2010 Edelmira Peregrino Go International Health Student of the Year.





Class of 2010

Every year, Burnet corridors are inundated with new faces – many of whom are students who have come to work with us and learn from us. Here are some of our new students who joined us in 2010:



Arthi Arulmuruganar

Hons Student.

Project: Signalling by the IgA receptor FcαRI; dependence on bivalent binding by the IgA Fc. Centre for Immunology.



Nadine Ata

Hons Student.

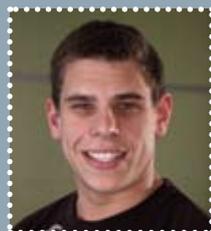
Project: The FaceSpace Project: Can social networking sites be used for sexual health promotion to high risk groups? Centre for Population Health.



Ineka Booth

Hons Student.

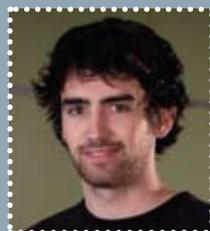
Project: Pro-inflammatory cytokines and cellular mediators in the Fc-gamma-R1a transgenic mouse model of Rheumatoid Arthritis. Centre for Virology.



Rob Borcich

Hons Student.

Project: Mutational analysis of structural elements within the HIV-1 gp120-gp41 glycoprotein involved in conformational signalling. Centre for Virology.



Kieran Cashin

Hons Student.

Project: Elucidating the Tropism of Diverse CXCR4-using HIV-1 Strains. Centre for Virology.



Jun Gu

Hons Student.

Project: Expression and Characterisation of Recombinant Soluble Heterodimers of the HCV Glycoproteins E1 and E2. Centre for Virology.



Isaac Han

Hons Student.

Project: Understanding how cells protect themselves from cytotoxic compounds. Centre for Immunology.



Katherine Harvey

Hons Student.

Project: Cell signalling in Plasmodium falciparum during red blood cell invasion. Centre for Population Health.



Bevan Hirst

Hons Student.

Project: Detection of single molecules of HIV nucleic acid using short oligo nucleotide FISH. Centre for Virology.



Elisha Horat

Hons Student.

Project: A Potential Role for NFκB1 in Immune Homeostasis. Centre for Immunology.

In addition to these new faces, we also had Yousef Al-Hammad, Sarah Charnaud, Kerry Ko, Rachel Sacks-Davies, Hamid Salimi and Rebecca Winter commence their PhD degrees at Burnet in 2010.



Judy Gold, Beckman-Coulter prize winner with David Anderson.



Award winner Elisha Horat from Centre for Immunology with David Anderson and Michael Roche.

Student Symposium

A new event was initiated in 2010, the Burnet Institute Student Symposium, which was a day-long symposium organised by the research students, led by the student representative, Michael Roche.

This involved presentations by around 30 of the students, and prizes for the best presentations. **Judy Gold** from Centre for Population Health won the Beckman-Coulter prize for the best presentation from a PhD student.

Elisha Horat from the Centre for Immunology won the Sigma honours student prize.

It was a great opportunity for the students to present their research to their peers in a relatively relaxed environment, and gave the senior Burnet staff a fantastic showcase of the breadth of talent in our research student population.



Niels Coppens

Masters.

Project: The role of HIV genome dimerization and structure on viral infectivity. Centre for Virology.



Eloise Dickmans

Hons Student.

Project: PADIE II: Prevalence of Alcohol and Drugs in an Emergency department. Centre for Population Health.



Nitasha Kumar

PhD Student.

Project: Dendritic Cell (DC) induced HIV latency in Resting CD4+T-cells. Centre for Virology.



Phuong Nguyen

PhD Student.

Project: Our Place on FaceSpace: Evaluating the use of social networking sites to promote sexual health and safer sex to higher risk groups. Centre for Population Health.



Saumya Ramanayake

Hons Student.

Project: Reversing HIV latency in primary resting CD4 positive T Cells. Centre for Virology.

Burnet is awarded the 'Best New Brand'



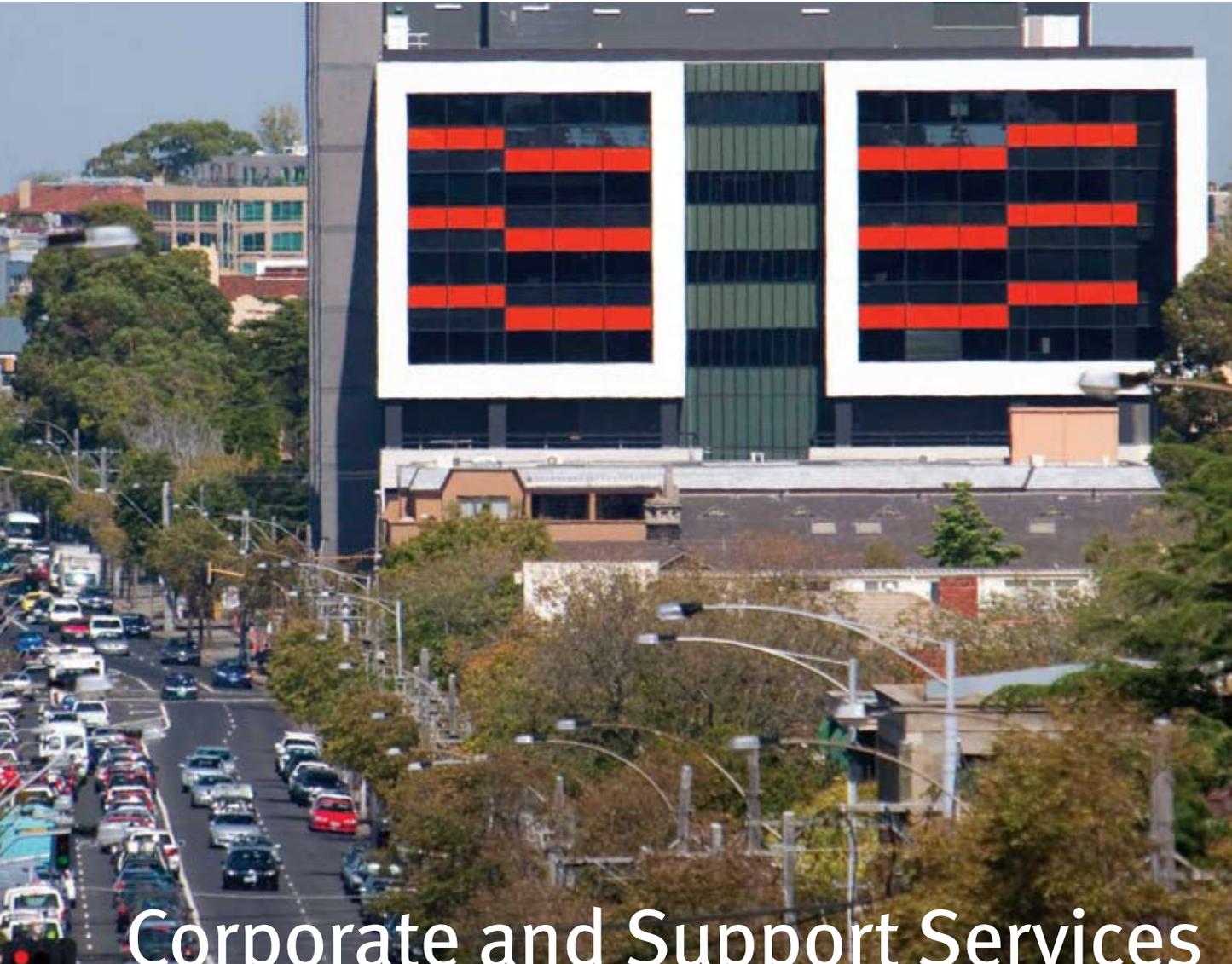
Simon Rowell (Oxygene Branding and Communications) and Professor Brendan Crabb hold the award from AMI for Best New Brand in Victoria.

The Australian Marketing Institute awarded the Burnet Institute brand the 'Best New Brand' created in Victoria for 2010.

It was important that the brand identified and communicated the organisation's values and generated positive stakeholder perceptions, and at the same time delivered on-going recognition and association with the brand and values.

The awards are judged against strict criteria that includes the issue being addressed, the solution, the marketing outcomes and value to the organisation.

Simon Rowell from Oxygene Branding and Communications worked with many staff members at the Institute to develop and implement the new brand.



Corporate and Support Services

mission

Burnet's Corporate and Support Services (CSS) seeks to deliver a value-added suite of services and facilities to enable our Centres to perform their work in the most professional and supportive environment possible.

We are responsible for ensuring our corporate and regulatory requirements are met, and the provision of 'behind the scene functions' such as IT support, OHS, facilities management and central laboratory services (such as flow cytometry, sterilisation etc), purchasing and accounts, financial management and reporting, HR management and services, payroll functions, public affairs and communications and fundraising activities. Burnet's Corporate and Support Services also includes the centralised Research and Legal Office, and Business Development Office, including IP management.

Overview

During 2010 Corporate and Support Services (CSS) activities continued to be refined in response to structural and operational changes, and the development of the Institute strategy. Recommendations from the 2009 review were progressively implemented aligning the skill-set necessary to deliver the services. While some further refinement is likely, the bulk of the changes have now been implemented and we are nearing the end of what has been a significant transition and positioning phase for the CSS, and the Institute more broadly.



Opposite: Burnet's new building is now a landmark for thousands of commuters on Melbourne's busy Punt Road.

Top: Staff members Andrea Eakins and Liz Nicol enjoying one of the many social events coordinated throughout the year by our social club.

Above (L-R): Professor John Reeder, the Hon Bob Katter MP, Professor Warwick Anderson, AM and CEO NHMRC, Professor Brendan Crabb, Director and CEO, Burnet Institute were just some of the guests at Parliament House in Canberra celebrating the 50th Anniversary of Sir Macfarlane Burnet winning his Nobel Prize for Medicine.

I am pleased to report that a range of indicators across all areas of CSS show nearly all objectives for 2010 were met, feedback has been positive, acknowledging the support provided and the approach in doing so, and its quality. CSS staff can be proud of achieving this result in a year of such change and challenges.

As mentioned elsewhere in this Report, the completion of the **Alfred Centre Stage 2 (ACS2)** project was a major milestone for the Institute. Staff within CSS played a very important role in this success, in particular **Dr Bruce Loveland** as Burnet's ACS2 project manager, and also **Peter Spiller** and **Rob Tanner** from the finance team, can be proud of delivering a \$90 million project on time and on budget. I would also like to acknowledge our external partners in achieving this result, Alfred Health, the Victorian Government (DBI), the Commonwealth Government (DoHA), ANZ, Boulderstones, Aurecon, and Davis Langdon.

Having built a building, the next challenge was its occupancy. **Pat Mottram** and an Institute-wide relocation team rose to this logistical challenge of coordinating the relocation across both the new building and within the existing Burnet Tower. With much preparatory work by the Facilities and IT teams, more than 200 staff were successfully relocated in April 2010.

Another highlight was the successful **Melbourne City ROMP** held in March, with nearly 12,000 participants and \$118,000 raised to support the Institute. The event also generated more than \$3m worth of media coverage and demonstrably raised the profile of Burnet and the work that we do. This event is an enormously complex and logistically taxing event to run, and the efforts of the ROMP team and other staff, and a large team of volunteers is much appreciated.



Our IT department provide an invaluable service to staff and students across the Insitute.

However, after four years we have sought to outsource the ROMP's event management, while retaining our position as charity partner for 2011 and beyond. This decision is consistent with the change in our fundraising strategy, moving from an events-focused portfolio to a more donor engagement strategy. This includes a proactive and focused major gifts program and the further development of our Bequest program. In 2010, we raised over \$5m via our fundraising activities and I would like to thank all those donors and supporters who so generously contributed to this record-breaking result.

The planning and foundation for an expanded **Business Development Office** evolved during the year, although much of the workload was focused on reviewing our patent portfolio and other commercialisation activities (see page 64). This included, via the Research and Legal Office, the support and submission of more than 35 NHMRC grant and fellowship applications in 2010.

The **Public Affairs and Communications (PAC)** team responded to the request for more regular internal communications with the launch of an internal communiqué *connect* as well as facilitating a record number of media interactions. PAC also supported a number of events such as the UNDPI NGO conference held in Melbourne in October and, with 2010 being the 50th anniversary of Macfarlane Burnet's Nobel Prize, there were a number of events, including a well supported 'Parliamentarians introduction to Burnet' held in Canberra in June. With the Institute's 25th anniversary in 2011 much planning for this year has already occurred.

Other ongoing core services such as finance and human resources, OHS, IT support and lab services and facilities were provided to various stakeholders throughout the year, all with an eye on adding value and creating the



Burnet's internal newsletter, connect, brings our workplace together.

best possible support to our research and public health Centres, and to the Board and senior management.

During a period of such change it is inevitable that some staff leave and their efforts were much appreciated. In particular I would like to acknowledge and thank two long-term employees in **Valerie Skahill** and **Susan Collins** who left after 15 and 20 years' service respectively. I thank all staff for your contribution throughout 2010 and look forward to further achievements in 2011.

And one final acknowledgement, to the reinvigorated Burnet Social Club, who during a period of institutional change played a large part in bringing us all together as one Burnet.

Geoff Drenkhahn
Chief Operating Officer

Corporate and Support Services: our staff

EXECUTIVE

Director and Chief Executive Officer

Brendan Crabb, BSc(Hons), PhD

Deputy Directors

P Mark Hogarth, PhD, NHMRC Senior Principal Research Fellow

David Anderson, BSc(Hons), PhD, NHMRC Senior Research Fellow

Chief Operating Officer

Geoff Drenkhahn, MBA Tech Mgr (Deakin), FAIM

Executive Officer

Paul Rathbone, BAppSc, Grad Dip (Public Relations), MBus(Marketing) (from Jun 2009)

Company Secretary

Peter Spiller, BBus, CPA

Personal Assistant to the Director

Valerie Skahill, BA(Hons) (to Feb 2010)

Andrea Eakins, (from Feb 2010)

Personal Assistants to Deputy Directors

Susan Collins (Professor Hogarth) (to Apr 2010)

Andrea Eakins (Professor Hogarth) (from Apr 2010)

Nadine Barnes (Associate Professor Anderson)

Personal Assistant to the Chief Operating Officer

Andrea Eakins (to Feb 2010)

BUSINESS DEVELOPMENT AND MANAGEMENT

BUSINESS DEVELOPMENT OFFICE

Head

David Anderson, BSc(Hons), PhD, NHMRC Senior Research Fellow

Manager, Research and Legal Office

Alison Greenway, PhD, BSc(Hons), LLB

Commercialisation Manager

Serina Cucuzza, BSc(Hons), BComm

FUNDRAISING AND EVENTS

Head

Brendon Grail, BBus (to May 2010)

Director of Events

Fiona Rhody-Nicoll, LLB(Hons)

Community Development Manager

Ian Haigh, BA

Relationships Manager

Pin Affleck, BFA(Hons) (to Sep 2010)

Events Administrator

Rachel Lenders, BA (to Jul 2010)

Trusts and Foundations Coordinator

Louise McNeil (to Jun 2010)

Rachel Lenders, BA (Jul to Dec 2010)

MELBOURNE CITY ROMP

Event Manager

Petrina Boles, BBus (to Sep 2010)

Events Coordinator

Stephanie Luketic, BBus, Dip HR, Adv Dip Bus Mgmt (to Jul 2010)

Marketing Coordinator

Clara Hilsen, BA (to Jul 2010)

PUBLIC AFFAIRS AND COMMUNICATIONS

Head

Paul Rathbone, BAppSc, Grad Dip (Public Relations), MBus(Marketing)

Deputy Head (from May 2010)

Event Media and Communications (to Apr 2010)

Tracy Parish, BA(Sports Journalism)

Marketing and Communications Manager

Gillian Chamberlain, AdvCertBus (RMIT), Cert IV MagWritEdit&Pub(RMIT), CertDirMar(ADMA)

Senior Public Affairs Officer

Tracy Routledge, BA(Communications) (to Sep 2010)

Public Affairs Officer

Hazel Squair, BMA(Public Relations)

Events Coordinator

Stephanie Luketic, BBus(Marketing), Dip HR, Adv Dip Bus Mgmt (from Jul 2010)

Receptionists

Amanda Fairbairn

Natalie Dillon (from May to Nov 2010)

Prudence Rees-Lee (from Dec 2010)

PHILANTHROPY

Head of Philanthropy and Director of the Sir Zelman Cowan Foundation

Ruth Rosh, BA(Pol Sci), Dip Ed, M Bus (Marketing) (from Apr 2010)

Database Administrator

Lisa Toone, (from Jul 2010)

RESOURCES MANAGEMENT

FINANCE

Chief Financial Officer

Peter Spiller, BBus, CPA

Accounting Manager

Pixie Tan, BCom, CPA

Finance Manager

Rob Tanner, BBA, CA

Assistant Accountant

Peter Dib

Finance Officers

Liz Kitchen

Sonja Murphy (to Apr 2010)

Payroll Officer

Jack Bambino

Purchasing Officers

Mark Hamilton, BA

Kevin Hesse

HUMAN RESOURCES

Human Resources Manager

Paul Duffy, BA, Grad Dip(HR/IR)

Human Resources Advisor

Jessica Kitch, BBSci, Grad Dip HR (from Nov 2010)

RESEARCH SUPPORT AND FACILITIES

Head

Bruce Loveland, PhD

OHS Manager

Margarete White, PhD

OHS Laboratory Specialist

Sol Hall (to Jun 2010)

INFORMATION TECHNOLOGY

Chief Technology Officer

Paul Stephens, BComp

Staff

Damon Warren, BSurv(Hons)

Matt Gray, Dip InfoSys

Dyson Simmons, BInfoSys (Hons)

John Ngo

Mark Bean, CCNA, CNA, MCP

FACILITIES MANAGEMENT

Facilities Manager

Soto Kolivas, PhD

Facilities Officer

Gary Jamieson, PhD

LABORATORY SERVICES

AMREP Senior Flow Cytometrist

Geza Paukovics, BA(Med Lab Sci)

Research Assistant – Flow Cytometry

Michael Thomson

Technical Assistants

Leanne Reardon

Barb Ledwidge

Storepersons

Blaine Oataway

Kerry Bridges-Tull

Maintenance Technician

Chris Pope



Donors and Supporters

How our supporters are making a difference at home and around the world.

Healthy Mothers, Healthy Babies Appeal

Our 2010 Healthy Mothers, Healthy Babies Appeal raised more than \$53,000. These funds are supporting the training of village health workers in remote parts of Papua New Guinea (PNG) to assist women in labour and are helping local partners provide clean delivery kits and important childhood vaccinations.

Funds raised as part of the Appeal are already generating tangible results. Health centre staff have been trained on birth dose vaccination and post natal care and administration. We have also conducted training with village health volunteers in six remote villages on recognising danger signs associated with birth.

With volunteers now sharing their knowledge with fellow community members and with 83 percent of births being assisted with vaccination (compared to a local average of 18 percent) the chance of survival of newborns and their mothers is improving throughout the region as a result of this program and the generosity of our benefactors.

“ Funds raised as part of the Appeal are already generating tangible results. ”

Lao Working Women’s HIV and Sexually Transmitted Infection (STI) Response Project

Since 2006, the Burnet Institute, supported by the Ivy H & Arthur A Thomas Trust as administered by Equity Trustees Limited, has been working to improve the health and education of female sex workers in Laos.

Young women in the provinces of **Vientiane and Sayabouli** have been provided with the information and skills required to protect themselves from HIV and other STIs.

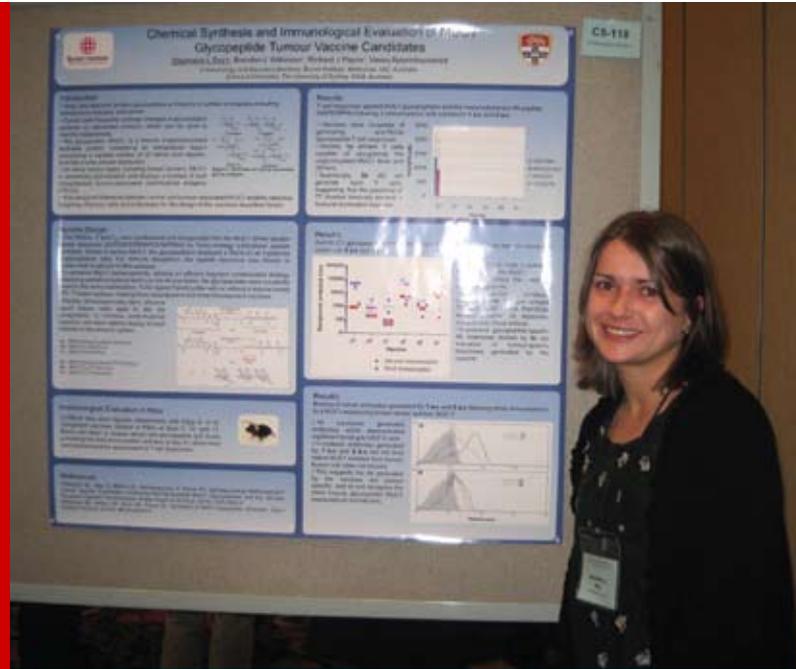
The project’s approach involves developing a cadre of ‘Peer Educators’ who are trained to discuss sensitive issues relating to HIV, STIs and safe sex with their peers. A second core element of the project builds capacity of the local authorities, enabling them to engage the wider community.

New flows of women arriving from rural and remote areas required an extension of Burnet’s involvement for a further two years to ensure the continued education and tailored interventions which enable these women to protect their own health and reduce infections.

Burnet’s renewed commitment for this important project has been made possible thanks to the valued support of the Ivy H & Arthur A Thomas Trust, as administered by Equity Trustees Limited, which generously granted \$52,000 over two years.

“ I am fortunate and excited to be given the opportunity by the Ian Potter Foundation to attend and present at this prestigious Keystone meeting. ”

DR STEPHANIE DAY



Melbourne City ROMP update

After three successful years, the Melbourne City ROMP has grown to a scale which was inconceivable to Burnet when it first developed the idea of a fun family day which would help to raise funds and awareness of Burnet and important health issues.

2010 brought the tipping point where we realised that to continue the event and to provide the opportunity for it to grow, we needed additional support. Burnet put in place a process to identify a partner to license the event while still maintaining the opportunity for large-scale engagement and fundraising.

At the time of writing this report, we are in the final stages of confirming this agreement and hope to see the Melbourne City ROMP return bigger and brighter than ever in 2012. We hope to see you there!

Thousands of Burnet supporters hit the streets for Burnet's premier fundraising event, the Melbourne City ROMP.

Staff development and training

With thanks to the Ian Potter Foundation and a grant for \$5,078, two motivated, young Burnet staff will be heading overseas to further develop their knowledge and expertise.

Dr Anna Hearps of the Centre for Virology will be undertaking a period of intensive study and training at Rush University, Chicago, USA, while **Dr Stephanie Day** of the Centre for Immunology will be attending a conference in Alberta, Canada.

Stephanie says, "The conference gives a thorough overview on the role of glycans in immunity and disease with focus on areas pertinent to our own research at Burnet. It will enable me to interact with, and gain feedback from, international leaders in the field. I am fortunate and excited to be given the opportunity by the Ian Potter Foundation to attend and present at this prestigious Keystone meeting."

Every year the Burnet Institute hosts a variety of events as a way to recognise and thank our donors and supporters.





(L-R): Maria Davoren,
Nadine Barnes,
Associate Professor
David Anderson,
Lisa Renkin
Dr Alison Greenway.
Absent:
Serina Cucuzza,
Dr Patricia Mottram.

Commercialisation and Translational Research

The **Business Development Office (BDO)** was established in 2009 to consolidate the Institute's extensive activities in commercialisation and translational research. These activities have continued to grow through 2010.

The BDO seeks to identify research from the Institute that has the potential to be developed into innovative products (such as diagnostics and vaccines) that can be used to improve the health of individuals or communities, and to identify and support suitable commercial relationships and/or translational research grant opportunities as appropriate for each project.

Some of the team's achievements for 2010:

During 2010, **Associate Professor Paul Gorry and Dr Jasminka Sterjovski** in collaboration with **Dr Martin Stone**, Monash University, were awarded an NHMRC Development Grant, with funding commencing 2011, for the **development of a novel assay** to determine whether the type of HIV strains present in patients are susceptible to a new class of approved drugs. These drugs are highly effective against some strains but ineffective against others. Current tests used to discriminate which strains are present are extremely costly and take several weeks. This has prevented the widespread use of these new drugs. Our goal is a simple laboratory test that would take around one day at greatly reduced cost.

Associate Professor Heidi Drummer and Dr Andy Pombourios continued to progress work on a highly promising **vaccine candidate** for the prevention of hepatitis C virus infection.

Burnet's ImmunoMonitoring Facility (IMF) led by **Associate Professors Rose Ffrench and Bruce Loveland** received accreditation in April 2010 from the National Association of Testing Authorities (NATA), Australia, in their Research and Development (R&D) program to develop **optimised and validated immunological assays** for clinical trials and pre-clinical research, compliant to ISO/AS17025. The IMF continues to work closely with Nucleus Network Pty Ltd on a number of clinical trials, including Australian and US biotechs and top 10 pharmaceutical companies.

The members of the Business Development Office in 2010

Associate Professor David Anderson – Head, Business Development Office

Ms Serina Cucuzza – Commercial Development Manager

Dr Alison Greenway – Legal Counsel and Research Office Manager

Dr Patricia Mottram – Project Manager

2010 Working Group Committee

Members include the individuals listed above, as well as:

Professor Mark Hogarth

Professor Geoffrey Pietersz

Dr David Randerson – Acuity Technology Management



The Burnet IMF is the first Victorian facility to receive NATA R&D accreditation, which is a great honour for both the Institute and our state.

Dr Elizabeth Grgacic was successful in receiving a NHMRC development grant to conduct rabbit immunisation trials for her novel trimer-based technology as a **candidate vaccine for HIV** (provisional patent application Chimeric Molecules). This technology has applications for other infectious diseases including influenza and has shown promising results during the pilot trials. The technology is undergoing validation studies by third-party collaborators in 2011.

Burnet was involved, with Austrade and DIIRD, in arranging a **trade mission to China** in conjunction with the ChinaBio Forum in Suzhou, Shanghai. The mission involved visiting the Zhangjiang Hi-Tech Park and BioBay as well as attending various networking events at the Shanghai World Expo 2010 Australian Pavilion. The aim of the trade mission was to provide Australian biotechnology companies with a snapshot of the Chinese Biotechnology industry and assist them in developing networks and contacts for potential future collaborations. Burnet has a long history of working in China through our Centre for International Health as well as biomedical research collaborations since 1992.

Burnet researchers were again successful in securing funding from the Australian Centre for HIV and Hepatitis Virology (ACH2), with **seven grants** commencing in 2010 across the key areas of diagnostics, vaccines and drug development. The ACH2 scheme funds translational projects specifically in the areas of HIV and hepatitis C.

The Burnet Institute continues to be a participant in the **CRC for Biomarker Translation** which officially commenced operation in 2007. Other participants include La Trobe University, The Mater Medical Research Institute, Mater Misericordiae Health Services, The Women's & Children Health Research Institute, and The Institute of Medical and Veterinary Science. The Commercial partners are Amgen (USA) and Becton Dickinson Biosciences (USA).

The CRC's principal objective is the development of antibodies directed against therapeutic and diagnostic targets (biomarkers) present on cells that play a key role in major diseases including autoimmune disease (especially rheumatoid arthritis) and cancers (haematological, colorectal, breast and prostate). The CRC has been awarded \$30.6 million over seven years.

Associate Professor David Anderson and Professor Suzanne Crowe have continued to progress their project for the **development of a rapid point-of-care test** to measure CD4+ T-cells in HIV-infected patients, essential for deciding when patients should commence antiviral treatment. Laboratory-based tests are readily available in developed countries, but Burnet's work (in collaboration with Rush University, Chicago and Duke University, Durham) aims to provide a simple test, suitable for use in resource-poor settings where there is no access to laboratory infrastructure.

Initial trials at PATH, Seattle have shown great promise, and further trials are scheduled in Malawi in 2011 in collaboration with UNC, Chapel Hill. The team was also successful in attracting MRCF funding for the spin out company See-D4 Pty Ltd to be used as a vehicle to assist in commercialising the technology in the developed world.

With partial support from an ACH2 grant in 2010, a new collaboration was commenced with Axxin Ltd, Richmond (Bill Hopper and Andrew Lysikatos), to develop a simple and robust reader instrument for the visual CD4 test, providing advantages in training and test accuracy in the field or clinic, and quality control in manufacturing and test development.



NEW PROVISIONAL PATENT APPLICATIONS – 2010

Title	Country	Filing Date	Number
Chimeric Molecules	US Prov	22 June 2010	61/285,708
Methods and reagents for quantifying nucleic acid fragmentation and apoptosis	US Prov	1 June 2010	61/350,419
Chemokine Co-Receptor Specificity Assays, Kits and Reagents Therefor	US Prov	14 July 2010	61/285,708,
Modified hepatitis C virus proteins	AU Prov	4 August 2010	2010903478

Board of Directors



Directors

The Directors of the Burnet Institute, all of whom act in an honorary capacity, along with the Executive Director and Deputy Executive Directors, who receive remuneration as paid members of staff, held office at any time during or since the end of the financial year are:

- Mr Alastair Lucas, BCom, FCPA** 1
 Chair, Burnet Institute Board of Directors; Director since 1998; Chair, Fundraising Committee; Member, Audit, Finance and Risk Committee, Investment Committee, ACS2 Project Committee; Vice Chair and Managing Director, Goldman Sachs; Chair, Cell Care Australia; Member, Founder's Board, Fauna & Flora International Australia; Director, Monash Institute of Medical Research; Member, Dean's Advisory Board for Monash University, Faculty of Medicine, Nursing and Health Sciences; Deputy Chair, Market Policy Group, Finsia; Member, Australian Takeovers Panel.
- Professor Brendan Crabb, BSc(Hons), PhD** 2
 Executive Director and CEO since March 2008; Member, Research Advisory Committee, Fundraising Committee and ACS2 Project Committee; Adjunct Professor, University of Melbourne; Adjunct Professor, La Trobe University; Adjunct Professor, Monash University; Director, AMREP Animal Services Pty Ltd; Member, Gene Technology Access Board of Management.
- Ms Denise Allen** 3
 Director since 2006 and resigned February 2011; Chair, Investment Committee; Director, Medical Research Commercialisation Fund (MRCF); Former Chair and Managing Director, Legg Mason Asset Management Australia Ltd; Director, Utilities of Australia; Director, AvSuper.
- Associate Professor David Anderson, PhD** 4
 Director since 2006 and resigned February 2011; Deputy Executive Director; Member, Research Advisory Committee; NHMRC Senior Research Fellow; Associate Professor, Department of Microbiology and Immunology, University of Melbourne; Director, See-D4 Limited.

- Professor Peter Colman, BSc, PhD** 5
 Director since 2011; Head Structural Biology Division, WEHI; Former Chief, CSIRO Division of Biomolecular Engineering.
- Mr Ross E Cooke, BCom, ACA** 6
 Director since 1998; Chair, Audit, Finance and Risk Committee, and Member, ACS2 Project Committee; Director, Paxton Partners; Director and President, Wintringham, and Wintringham Housing Ltd.
- Professor Peter Doherty, AC, FAA, FRS** 7
 Director since 2002 and resigned March 2011; Nobel Laureate, Department of Microbiology and Immunology, University of Melbourne.
- Mr John K Dowling, FREI, FAPI** 8
 Director since 2000; Member, Research Advisory Committee; Managing Partner, K L Dowling & Co.
- Mr Neil Edwards, BEcon (Hons), FAICD, FIPAA** 9
 Director since 2006 and resigned June 2010; Member, Audit, Finance and Risk Committee and ACS2 Project Committee; CEO, Chifley Business School Chairman; Regional Channels Authority.
- Professor P Mark Hogarth, PhD** 10
 Director since 2006 and resigned February 2011; Member, Research Advisory Committee, and ACS2 Project Committee; Deputy Executive Director to February 2011; NHMRC Senior Principal Research Fellow; Former Executive Director, Austin Research Institute; Adjunct Professor, University of Melbourne; Adjunct Professor, Monash University; Director, IgAvax Pty Ltd.
- Professor, the Hon Barry O Jones, AO,** 11
 FAA, FAHA, FTSE, FASSA, FRSA, FRSV, FAIM
 Director since 2000; Chair, Vision 2020 Australia; Chair, Port Arthur Historic Site Management Authority; Professorial Fellow, University of Melbourne; Former Vice Chancellor's Fellow, University of Melbourne; Former Commonwealth Minister for Science; Former Chair, Victorian Schools Innovation Commission.
- Mr Henry Lanzer, BCom, LLB** 12
 Director since 2008; Member, Fundraising Committee; Managing Partner, Arnold Bloch Leibler; Director, Premier Investments; Director, The Just Group; President, Mount Scopus Memorial College Foundation.



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Professor James McCluskey, 13
 MBBS, B Med Sci, MD, FRACP, FRCPA
 Director since 1998 and resigned March 2011; **Chair,** Research Advisory Committee; **Pro Vice-Chancellor,** Research Partnerships at The University of Melbourne; **Deputy Head,** Department of Microbiology and Immunology; **Consultant Immunologist** to the Victorian Transplantation and Immunogenetics Service, Australian Red Cross Blood Service.

Mr Robert L Milne, BEng (Civ), FIE (Aust), CP Eng 14
 Director since 2000; **Chair,** ACS2 Project Committee and **Member,** Fundraising Committee; **Chair,** Cockram Corporation and subsidiaries.

Mrs Maria Myers, AO, BA, BSW, LLB 15
 Director since 2004; **Member,** Fundraising Committee; **Chairman,** Kimberly Foundation Australia; **Director,** Mary Ward International Australia; **Director,** Australian String Quartet; **Director,** Elisabeth Murdoch Sculpture Foundation; **Director,** Dunkeld Pastoral Company Pty Ltd; **Member,** Loreto College Ballarat School Council.

Ms Mary Padbury, BA, LLB 16
 Director since 2011; **Chairman,** Blake Dawson; **Domain Name Panelist,** World Intellectual Property Organisation; **Director,** Australasian Gastrointestinal Trials Group (GI Cancer Institute); **Member,** Chief Executive Women.

Ms Natasha Stott Despoja 17
 Director since 2008; **Member,** Fundraising Committee; **Former Senator** for South Australia; **Former Leader,** Australian Democrats; **Director,** beyondblue; **Director,** South Australian Museum; **Director,** Australian Defense Association; **Member,** Advisory council, Museum of Australian Democracy; **Member,** Alumni Advisory Board, University of Adelaide; **Member,** Advertising Standards Board; **Honorary Research Fellow,** University of Adelaide.

Professor Michael Toole, MBBS, B Med Sci, DTM&H 18
 Director since 2011; **Adjunct Professor,** School of Public Health, Monash University; **Board Member,** Three Diseases Fund for Burma/Myanmar; **Member,** Independent Monitoring Board of the Global Polio Eradication Initiative; **Member,** Technical Review Panel, Global Fund to Fight AIDS, TB, and Malaria; **Founding Board Member,** Médecins Sans Frontières Australia.



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Resigned as Director during 2010 or since year end:

Mr Neil Edwards, BEcon (Hons), FAICD, FIPAA
 Director since 2006 and resigned June 2010

Ms Denise Allen
 Director since 2006 and resigned February 2011

Associate Professor David Anderson, PhD
 Director since 2006 and resigned February 2011

Professor P Mark Hogarth, PhD
 Director since 2006 and resigned February 2011

Professor Peter Doherty, AC, FAA, FRS
 Director since 2002 and resigned March 2011

Professor James McCluskey,
 MBBS, B Med Sci, MD, FRACP, FRCPA
 Director since 1998 and resigned March 2011.



Patrons

Burnet Patron Mr Eddie McGuire, AM.



Ambassadors

Ms Princess Kasune Zulu, author and AIDS activist with Burnet researcher, Associate Professor Johnson Mak.

Patrons

Patron-in-Chief

Governor of Victoria

Professor David de Kretser, AC (to May 2011)

The Honourable Alex Chernov, AO, QC (from May 2011)

Patrons

Professor Gordon Ada, AO, Australian National University

Hon Steve Bracks, AC, Former Premier of Victoria

Mr Nobby Clark, AO, Former Chief Executive Officer, National Australia Bank

Dr John Connell, AM, Founder, John Connell and Associates

Rt Hon Sir Zelman Cowen, AK, Former Governor General of Australia

Professor Allan Fels, AO, Former Chairman of ACCC and Dean of the Australian & New Zealand School of Government

Rt Hon Malcolm Fraser, AC, Former Prime Minister, Australia

Professor David Ho, Director, The Aaron Diamond AIDS Research Centre, New York

Hon Michael Kirby, AC, CMG, Member of the International Bioethics Committee of UNESCO and Member of the UNAIDS Global Panel on Human Rights

Mr Eddie McGuire, AM, Journalist and Television Personality

Professor Sir Peter Morris, AC, Royal College of Surgeons, London

Mr John So, Former Lord Mayor of Melbourne.

Ambassadors

Ms Deanna Blegg, Elite athlete and HIV-positive mother

Ms Belinda Collins, author and AIDS activist

Mr Harry (Heretier) O'Brien, Collingwood Football Club player and humanitarian

Ms Princess Kasune Zulu, author and AIDS activist.

Affiliations

The Burnet Institute is a partner in the Alfred Medical Research and Education Precinct (AMREP) with close working relationships and collaborations with The Alfred hospital, Baker IDI Heart and Diabetes Institute, and Monash University. In addition, the Burnet Institute has formal affiliations with the University of Melbourne and Monash University.

Governance Statement

The Board of Directors has adopted a Governance framework which incorporates the ‘Corporate Governance Principles and Recommendations’ of the Australian Stock Exchange and which is appropriate for the size, complexity and operations of the Burnet Institute. While some of these provisions are particular to listed for-profit corporations, many are just as relevant to a complex not-for-profit entity such as the Burnet Institute as they are to the commercial sector. The ongoing relevance and effectiveness of this framework will be periodically reviewed to reflect changing circumstances and ways of improving the practices we have adopted.

Role of the Board and Management

The Board’s primary role is the protection and enhancement of the long-term interests of the Burnet Institute and its stakeholders. To fulfil this role, the Board gives consideration to the range of research and other activities that are appropriate to the Institute ensuring that the key stakeholders’ interests are addressed. The Board is responsible for the overall governance of the Institute including formulating (on the advice of the Executive Director) its strategic direction, ensuring that risk management policies are in place and are being monitored, establishing and monitoring the Executive Director’s and management’s goals and performance and ensuring the integrity of internal control and management information systems. It is also responsible for approving and monitoring financial and other reporting.

To assist the execution of its responsibilities, the Board has established the following Board committees:

- Audit, Finance and Risk
- Investment
- Fundraising
- Project
- ACS2 Research Advisor.

Matters attended to by Board Committees are reported to the Board following each committee meeting. Board Committees are authorised to seek any information they require from any officer of the Institute and may take such independent professional advice as they consider necessary. They have no executive powers regarding their findings and recommendations. The Board may at any time determine to address matters identified within a committee’s terms of reference at the full Board level.

Responsibility for the operation and administration of the Institute has been delegated to the Executive Director and the executive management team. These responsibilities have been delineated by formal authority delegations.

Composition of the Board

In accordance with the Institute’s Constitution, the number of directors constituting the Board must not be less than eight and not more than 20 and will include the Executive Director in its number. A majority of the Board should be independent directors, in particular the role of the Chair and Executive Director should not be exercised by the same

person. Directors shall be appointed by resolution of the Board and each affiliated university may propose one Director.

The appointment of Board Members is run by the Chair of the Board who will review nominations in consultation with the Executive Director and other Members.

Appointments will be approved by the Board and confirmed at the AGM.

All Board Members appointed to the Burnet Institute Board will receive a letter of appointment from the Chair, which sets out the basis of the appointment. That letter will outline background information, documentation and policies including:

- Term of appointment
- Meeting attendance expectations
- Governance charter
- Constitution
- Committees
- Board papers
- Confidentiality
- Access to professional advice
- Conflicts of interest
- Induction.

As a general rule, Board Members are not expected to serve for more than 10 years. This rule will be subject to review on a case-by-case basis.

Ethical and Responsible Decision Making

All Directors and employees are expected to discharge their duties in good faith and act honestly in the best interests of the Institute, striving at all times to enhance the reputation and performance of the Institute. Directors must ensure that they use the powers of office for the proper purpose and in the best interests of the Institute as a whole. They must not make improper use of information gained through their position as a director, or take improper advantage of their position as a director.

Directors are required to undertake diligent analysis of all proposals placed before the Board and make reasonable enquiries to ensure that the Institute is operating efficiently, effectively and legally towards achieving its goals.

Directors must keep the Board advised, on an ongoing basis, of any interest that could potentially conflict with those of the Institute and any development which may impact the directors’ perceived or actual independence. The Board has procedures in place to allow directors to disclose potential conflicts of interests.

Directors do not participate in the day-to-day management of the Institute. Consequently, representations or agreements with suppliers, clients, employees, consultants, professional firms or other parties or organisations are made by management unless such an authority is explicitly delegated by the Board to directors, either individually or as a Member of a Committee.

Governance Statement

The Institute has adopted guidelines for dealing in securities. Directors and employees have been advised of the seriousness and consequences of trading in public companies with which the Institute has entered into commercial arrangements, when in possession of confidential information which would have a material effect on the share price of those companies. The Company Secretary's written approval must be sought before Board Members and employees can trade shares in these companies. Approval will be granted when the Company Secretary is satisfied that the Board Member or employee does not have confidential information in these companies.

Risk Management

The Board, through its Audit, Finance and Risk Committee, has responsibility for ensuring that risk management policies are in place and are being monitored. The Audit, Finance and Risk Committee reports to the Board regularly on the status of risks.

The Institute's risk management process is supported by:

- Australian/New Zealand Standard AS/NZS 4360: 1999 - Risk Management, which provides a generic guide for the establishment and implementation of the risk management process involving the identification, analysis, evaluation, treatment and ongoing monitoring of risks
- Burnet Institute's Risk Management guidelines
- Training as required to ensure that management and staff of the Burnet Institute understand and implement this Policy.

Audit, Finance and Risk Committee

The main role of the Audit, Finance and Risk Committee is to audit the business operations and to oversee the finance and risk management functions. The Committee shall have unlimited access to the Internal and External Auditors and to senior management and may require reports and presentations on specific items.

Specific responsibilities of the Committee include:

- Reviewing the risk management framework and internal control processes relating to all risks of the Institute
- Monitoring internal controls in relation to financial and commercial activities, legislative and regulatory conformance and asset protection
- Ensuring that the preparation and presentation of the annual financial statements show a true and fair view and comply with all relevant accounting standards and statutory requirements
- Facilitating open communication between the Board, Audit, Finance and Risk Committee, Senior Management and Auditors

- Determining the adequacy of the Institute's administrative, quality, project and accounting systems
- Developing and enforcing a framework for accountability at all levels of the organisation.

Remuneration and Succession Planning

The Remuneration Committee reviews and makes recommendations to the Executive Director on remuneration packages and policies applicable to senior staff.

The review of the Executive Director's performance is conducted by the Chair with one other Board Member. However, all Board Members have the opportunity to provide input into the process. The Executive Director's remuneration is approved by the Board.

Succession planning is undertaken as follows:

- In relation to the Executive Director – conducted by the Board
- In relation to other senior staff – by the Executive Director with input from the Board
- In relation to staff below senior level – by the Executive Director with input from the senior management team.

Integrity in Financial Reporting

The Audit, Finance and Risk Committee manages the relationship between the Institute and the external auditor on behalf of the Board. It recommends to the Board potential auditors for appointment and the terms of engagement, including remuneration. The Audit, Finance and Risk Committee evaluates the performance of the external auditor during its term of appointment against specified criteria which include delivering value to stakeholders and the Institute, cost-effectiveness and maintaining the highest levels of professional integrity, objectivity and independence.

The Executive Director and the Chief Financial Officer provide formal statements to the Board that in all material respects.

The Institute's financial statements present a true and fair view of the Institute's financial condition and operational results and comply with relevant accounting standards.

The risk management and internal compliance and control systems are sound, appropriate and operating efficiently and effectively.

ASX Corporate Governance Principles and Recommendations

ASX Recommendation		Compliance
1	Lay solid foundations for management and oversight	
	1.1 Establish the functions reserved to the Board and those delegated to senior executives	Comply
2	Structure the Board to add value	
	2.1 A majority of the Board should be independent Directors	Comply
	2.2 The Chair should be an independent Director	Comply
	2.3 The roles of Chair and Chief Executive Officer (CEO) should not be exercised by same person	Comply
	2.4 The Board should establish a nomination committee	Comply
	2.5 Disclose the process for evaluating the performance of the board, its committees and individual directors	Comply
3	Promote ethical and responsible decision-making	
	3.1 Establish a code of conduct	Comply
	3.2 Establish a policy concerning trading in company securities by Directors, senior executives and employees	Comply
4	Safeguard integrity in financial reporting	
	4.1 Establish an Audit Committee.	Comply
	4.2 Audit Committee structure to include: <ul style="list-style-type: none"> • Only non-executive Directors • A majority of independent Directors • An independent chairperson who is not chairperson of the Board • Consists of at least three members 	Comply Comply Comply Comply
5	Make timely and balanced disclosures	
	5.1 Continuous policies and procedures	N/A
6	Respect the rights of stakeholders	
	6.1 Design a communications policy for promoting effective communication with stakeholders and encourage their participation at general meetings	Comply
7	Recognise and manage risk	
	7.1 Establish policies for the oversight and management of material business risks	Comply
	7.2 Management to design and implement the risk management and internal control system to manage the material business risks	Comply
	7.3 Written statement to Board by CEO and CFO in accordance with section 295A of the Corporations Act	Comply
8	Remunerate fairly and responsibly	
	8.1 The Board should establish a Remuneration Committee	Comply
	8.2 Distinguish non-executive directors' remuneration from that of executive directors and senior executives	Comply

Committee Members

BOARD SUB-COMMITTEES:

Audit Finance & Risk Committee:

Ross Cooke – Chair
Neil Edwards (to June 2010)
Alastair Lucas

Investment Committee:

Denise Allen – Chair (to Feb 2011)
Sid Khotkar*
David Lee*
Alastair Lucas

Research Advisory Committee:

James McCluskey – Chair
Michael Alpers*
David Anderson
Lorena Brown*
Nick Crofts*
Brendan Crabb
John Dowling
Mark Hogarth
Anne Kelso*
John McNeil*

Fundraising Committee:

Alastair Lucas – Chair
Brendan Crabb
Henry Lanzer
Robert Milne
Maria Myers
Natasha Stott Despoja

ACS2 Project Committee:

Rob Milne – Chair
Ross Cooke
Brendan Crabb
Neil Edwards
Mark Hogarth
Alastair Lucas

INTERNAL COMMITTEES:

Scientific Advisory Committee:

Brendan Crabb – Chair
David Anderson
Marion Brown
Suzanne Crowe
Geoff Drenkhahn
Steve Gerondakis
Margaret Hellard
Mark Hogarth
Robert Power
John Reeder
Mike Toole

OH&S Committee:

Con Sonza – Chair
Brendan Crabb
Geoff Drenkhahn
Paul Gilson
Sol Hall
Soto Kolivas
Bruce Loveland
Johnson Mak
Andy Poubourios
Margarete White

Laboratory/Group

Nadine Barnes
Amanda Brass
Rebecca Butcher
Sarah Charnaud
Trish Clark
Stephanie Day
Paula Ellenberg
Anne Ellett
Matt Gray
Raelene Grumont
Blaine Oataway
Owen Proudfoot
Laveena Sharma

Laboratory Users Group:

Heidi Drummer – Chair
David Anderson
Jenny Anderson
Alyssa Barry
Melissa Churchill
Brendan Crabb
Geoff Drenkhahn
Rosemary Ffrench
Steve Gerondakis
Paul Gilson
Paul Gorry
Elizabeth Grgacic
Sol Hall
Mark Hamilton
Anthony Jaworowski
Bruce Loveland
Johnson Mak
Meredith O'Keeffe
Andy Poubourios
Li Shuo
Ajantha Solomon
Con Sonza
Gilda Tachedjian
Margarete White

Research Students Committee:

Rosemary Ffrench – Chair
Michael Roche –
Student Representative
Campbell Aitken
Alyssa Barry
Melissa Churchill
Heidi Drummer
Paul Gorry
Elizabeth Grgacic
Anthony Jaworowski
Maree Powell
Paul Ramsland
Gilda Tachedjian

Laboratory Equipment and Facilities Committee:

Melissa Churchill – Chair
Ashish Banjeere
Alyssa Barry
Brendan Crabb
Kylie Goy
Vicki Greengrass
David Harrison
Marcel Hinjen
Gary Jamieson
Soto Kolivas
Maree Powell
Paul Rathbone
Gilda Tachedjian

IP Working Group:

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Serina Cucuzza
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Geoff Pietersz
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AMREP Precinct Animal Centre:

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Helen Kiriazis*
Mary Klein*
Debra Ramsey*
Michael Skilton*
David Spiteri*
Chris Tikellis*

* Member external to the Burnet Institute

Financial Summary

Statement of Comprehensive Income

AS AT 31 DECEMBER 2010

	Notes	2010 \$'000	2009 \$'000
Operating revenue	3	46,684	44,988
Research and development laboratory consumables expenses		(3,494)	(4,158)
Employee expenses		(20,505)	(20,517)
Depreciation and amortisation expenses	4	(1,200)	(1,181)
Research and development non-laboratory expenses		(16,363)	(16,739)
Other expenses from ordinary activities	5	(5,101)	(4,220)
Total operating expenses		(46,663)	(46,815)
Results from operating activities		21	(1,827)
Financial income	7	709	1,094
Financial expenses	7	(1,955)	(293)
Net finance (costs)/ income		(1,246)	801
Property management income	3	3,040	-
Reversal of impairment		2,807	-
Depreciation and amortisation expenses – property management		(1,058)	-
Property management operating costs		(267)	-
Net property management income		4,522	-
Capital grants and income on capital grants	3	-	20,945
Building costs		-	(790)
Impairment of construction in progress		-	(22,700)
Capital profit/(loss) before income tax		-	(2,545)
Profit/(loss) before income tax		3,297	(3,571)
Income tax attributable to profit		-	-
Profit/(loss) after income tax		3,297	(3,571)
Other Comprehensive Income			
Net change in fair value of available-for-sale financial assets		(83)	12
Income tax on other comprehensive income		-	-
Other comprehensive income for the period net of income tax		(83)	12
Total Comprehensive Income for the period		3,214	(3,559)

Statement of Financial Position

AS AT 31 DECEMBER 2010

	Notes	2010 \$'000	2009 \$'000
CURRENT ASSETS			
Cash and cash equivalents – operating	21(i)	15,574	16,331
Trade and other receivables	8	6,364	4,845
Inventories		103	83
Other financial assets	10	103	82
TOTAL CURRENT ASSETS		22,144	21,341
NON-CURRENT ASSETS			
Investments	9	3,020	3,064
Property, plant and equipment	11	70,398	17,079
Construction in progress	12	-	42,086
TOTAL NON-CURRENT ASSETS		73,418	62,229
TOTAL ASSETS		95,562	83,570
CURRENT LIABILITIES			
Trade and other payables	13	3,994	4,923
Borrowings	14	388	378
Current tax liabilities	15	154	140
Provisions	16	3,086	2,877
Deferred income	17	11,133	13,354
TOTAL CURRENT LIABILITIES		18,755	21,672
NON-CURRENT LIABILITIES			
Borrowings	14	34,950	25,621
Provisions	16	920	884
Deferred income	17	12,948	10,660
Derivatives	18	392	350
TOTAL NON-CURRENT LIABILITIES		49,210	37,515
TOTAL LIABILITIES		67,965	59,187
NET ASSETS		27,597	24,383
EQUITY			
Retained earnings		7,741	7,281
Building reserve		19,856	17,019
Fair value reserve		-	83
TOTAL EQUITY		27,597	24,383

The Macfarlane Burnet Institute for Medical Research and Public Health Limited is a signatory to the Australian Council for International Development (ACFID) Code of Conduct. The Code requires members to meet high standards of corporate governance, public accountability and financial management. In accordance with the ACFID code of conduct, the Institute had nil balances in the following categories as at the end of the financial year which are required to be disclosed separately: **Non-Current Assets:** other financial assets, investment property, intangibles, and other non-current assets; **Current Liabilities:** other financial liabilities and other current liabilities; **Non-Current Liabilities:** trade and other payables, other financial liabilities and other non-current liabilities.

Statement of Changes in Equity

AS AT 31 DECEMBER 2010

	Retained Profits \$'000	Building Reserve \$'000	Fair Reserve \$'000	Value Total \$'000
Balance at 1 January 2009	8,773	19,098	71	27,942
Fair value adjustment	-	-	12	12
Total other comprehensive income for the period	-	-	12	12
Operating profit/(loss)	(1,492)	(2,079)	-	(3,571)
Total comprehensive income for the period	(1,492)	(2,079)	12	(3,559)
Balance at 31 December 2009	7,281	17,019	83	24,383
Balance at 1 January 2010	7,281	17,019	83	24,383
Fair value adjustment	-	-	(83)	(83)
Total other comprehensive income for the period	-	-	(83)	(83)
Operating profit/(loss)	460	2,837	-	3,297
Total comprehensive income for the period	460	2,837	(83)	3,214
Balance at 31 December 2010	7,741	19,856	-	27,597

Burnet Institute International Development Activities Operating Statement

AS AT 31 DECEMBER 2010

	2010	2009
	\$'000	\$'000
Revenue		
Donations and gifts – monetary	218	315
Donations and gifts – non-monetary	-	3
Legacies and bequests	-	-
Grants:		
AusAID	14,978	15,597
Australian organisations	302	1,250
Overseas organisations	1,767	1,284
Investment Income	-	-
Other Income	1,762	2,423
Total revenue	19,027	20,872
Disbursements		
International programs:		
Funds to international programs	13,286	14,101
Program support costs	1,854	2,871
Community education	-	-
Fundraising costs:		
Public	10	4
Government, multilaterals and private	365	234
Administration	1,214	1,011
Non-monetary expenditure	-	3
Total international aid and development expenditure	16,729	18,224
Expenditure for international political or religious proselytisation programs	-	-
Domestic projects	3,331	2,895
Total expenditure	20,060	21,119
Excess/(Deficiency) of revenue over disbursements	(1,033)	(247)

Notes:

No single appeal or form of fundraising for a designated purpose generated 10% or greater of the Burnet Institute's total income. The prior year's balances have been adjusted to conform with the current year's presentation.



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Achievements

Grants

Current Grants

Adams J, Bouilett P, Colman Cory SP, **Gerondakis S**, Huang D, Linden G, Stasser A, Vaux D, Visvade J. Program Grant (NHMRC). *Roles of Impaired Apoptosis and Differentiation in Tumorigenesis and Therapy*. \$20,404,520 (2007-2011).

Anderson, D. Fellowship (NHMRC). Uncoupled Research Fellowship. \$583,750 (2007-2011).

Anderson J, Hope T, **Tachedjian G**. Project Grant (NHMRC). *Mechanisms underlying APOBEC3G restriction of HIV*. \$518,250 (2008-2010).

Cherry, C. Career Development Award (NHMRC). Uncoupled Career Development Award Level 1. \$370,000 (2009-2012).

Cowman A, Brown G, **Crabb B**, Handman E, McConville M, McFadden G, Schofield L and Speed T. Program Grant (NHMRC). *Host Parasite Interactions: disease, pathogenesis and control*. \$12,940,270 (2006-2010).

Cox, H. Public Health Fellowship (NHMRC). *TB drug resistance in PNG: Implications for treatment success and TB control*. \$274,000 (2007-2010).

Crabb B, Cowman et al. Bill and Melinda Gates Foundation. *Preclinical prioritization of blood-stage malaria vaccine candidates*. US\$2.916 million (2007-2010).

Crowe S, Malau C, O'Connor J, Tiban K, Spelman. Program Grant (NHMRC). *Molecular Epidemiology of HIV and TB in Asia Pacific Secretariat of the Pacific Community. TB - Kiribati Project*. \$100,146 (2008-2010).

Crowe S. Fellowship (NHMRC). Uncoupled Research Fellowship. \$726,250 (2008-2012).

Danta M, **Hellard M**, Sasadeusz J, Prestage G, Matthews G. NHMRC. *Defining sexual transmission of hepatitis C among gay men*. \$380,050 (2009-2010).

Degenhardt, L. Senior Research Fellowship (NHMRC). \$595,000 (2008-2012).

Degenhardt L, Mathers B, Howard J, Mattick RP, and Wodak A. Open Society Institute. *The Reference Group on HIV/AIDS and injecting drug use*. USD\$82,880 (2009-2010).

Dietze P and Hellard M. Commonwealth Department of Health and Ageing. *Ecstasy and related drugs reporting system (EDRS)*. \$60,954 per year. (Ongoing).

Dietze P, Munir V, Johnston J, Fry C, Smit D and **Degenhardt L.** NHMRC. *The risk factors for ecstasy and related drug overdose: A case-crossover study*. \$310,125 (2007-2010).

Dietze P, Aitken C, Jolley D, Kerr T, Hickman M and **Stoové M.** NHMRC. *The natural history of injecting drug use among IDU in Melbourne: A prospective cohort study*. \$708,000 (2009-2014).

Dietze P, Hellard M and Reddel S. Commonwealth Department of Health and Ageing. *Illicit Drug Reporting System (IDRS)*. \$66,008 per year. (Ongoing).

Dietze, P. Career Development Award (NHMRC). \$550,000 (2006-2010).

Dietze P, Munir V, Johnston J, Fry C, Smit D, **Degenhardt L.** Project Grant (NHMRC) *The risk factors for ecstasy and drug related overdose: A case crossover study*. \$310,125 (2007-2010).

Drummer H, Poubourios P. Project Grant (NHMRC). *Role of the hepatitis C virus glycoprotein E2 variable regions in viral entry and antibody mediated neutralization*. \$521,500 (2009-2011).

Drummer, H. Career Development Award (NHMRC). *R Douglas Wright Biomedical Career Development Award*. \$452,500 (2007-2011).

Ffrench, R. Industry Fellowship (NHMRC). *Development and immunogenicity testing of 'Virus-Like particle' vaccines*. \$475,000 (2006-2010).

Gavin, A. Future Fellowship, ARC. *The roles of novel pathways in the activation and regulation of the adaptive immune response in health and disease*. \$788,400 (2009-2013).

Gerondakis, S. Project Grant, Leukemia and Lymphoma Society of America Specialized Center of Research Grant. *Apoptosis in Hematopoiesis*. \$8,930,000 (2006-2010).

Gerondakis, S. Fellowship (NHMRC). *Uncoupled Research Fellowship*. \$675,000 (2006-2010).

Gerondakis, S. Project Grant (NHMRC). *The transcription factors c-Rel and RelA serve distinct roles in the development and function of CD4 Regulatory T cells*. \$483,500 (2009-2011).

Gilson P, Crabb B, de Koning-Ward T and Street I. Grand Challenge Exploration Grant. *A novel virulence-associated malaria drug target*. USD\$100,000 (2009-2010).

Gilson P, de Koning-Ward T and Boddey J. (NHMRC). *Identification of the Plasmodium falciparum translocon that exports parasite proteins into their erythrocytic hosts*. \$362,250 (2008-2010).

Gorry, P. Career Development Award (NHMRC). Uncoupled Career Development Award Level 2. \$409,000 (2009-2012).

Gorry P, Churchill M. Project Grant (NHMRC). *Adaptive changes in HIV-1 subtype C envelope glycoproteins contributing to pathogenicity*. \$410,350 (2009-2011).

Gowan E, **Loveland B.** Project Grant (NHMRC). *Multiple vector vaccine for hepatitis C virus*. \$463,000 (2009-2011).

Hellard M, Donovan B, Guy R, Kaldor J, Sullivan E and Dimech W. Federal Government Chlamydia Targeted Grants Program. *Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance (extension)*. \$699,362 (2009-2010).

Hellard M, Guy R, Kelly H and Fairley C. Victorian Department of Human Services. *HIV, HCV and Chlamydia Sentinel Surveillance in Victoria*. \$425,000 (2009-2012).

Achievements

Hellard M, Stoové M, Bergeri I and van Gemert C. Queensland Department of Health. *Report on opportunities for establishing a sentinel hepatitis C surveillance network and conducting an investigation of hepatitis C surveillance activity in Queensland.* \$117,909 (2009-2010).

Hellard, M. Senior Research Fellowship (NHMRC). *Innovative research approaches to understanding the transmission and reduce the impact of blood borne viruses and sexually transmitted infections on the community.* \$560,000 (2009-2013).

Hellard M, Stoové M, Pedrana A, Gold J, Howard S, Benda P, Batrouney C, Asselin D, **Reeder J,** Hocking J and Milne C. Victorian Department of Human Services. *Our Place on FaceSpace: Using Social Networking Sites to Promote Sexual Health and Safer Sex to Higher Risk Groups.* \$176,323.70 (2009-2010).

Hellard, M. Fellowship (NHMRC). Uncoupled Research Fellowship SRFA. \$560,000 (2009-2013).

Hocking J, Gunn J, Fairley CK, Kaldor J, Donovan B, Low N, Law M, Carter R, Imrie J, Pitts M, Mitchell A, Gertig D, Saville M, Temple-Smith M, Sanci L, Pirotta M, Chen M, **Hellard M** and Tabrizi S. RFT 266/0607. *Tender for the design, modelling and evaluation of the chlamydia pilot in general practice.* \$1,599,405 (2008-2010).

Hogarth, M. Fellowship (NHMRC). Uncoupled Research Fellowship. \$721,250 (2007-2011).

Hogarth M, Mottram P, Powell M. Project Grant (NHMRC). *The role of Fc RIIa in antibody dependent tissue destruction in autoimmunity.* \$516,375 (2008-2010).

Hogarth M, Wines B, Powell M. Project Grant (NHMRC). *Structure and Function of Receptors for IgG (FcγR).* \$741,000 (2008-2010).

Hogarth, M. CRC Transbio Ltd. *CRC for Biomarker Translation.* \$30.59 million (2006-present).

Jaworowski A, Crowe S. Project Grant (NHMRC). *ITAM signalling proteins in chronic viral disease.* \$438,000 (2009-2011).

Kinner S, Jamrozik, Williams and Alati. Project Grant (NHMRC). *Investigating Mortality Among Ex-Prisoners In Queensland: A Data Linkage Study.* \$430,000 (2007-2010).

Kinner S, Lennox, Jamrozik, Haswell-Elkins, Williams, Alati, Boyle, Vlack and Taylor. Strategic Award Passports to advantage (NHMRC). *Health and capacity building as a basis for social integration.* \$1,445,000 (2007-2012).

Kinner, S. Postdoctoral Fellowship (NHMRC). *Monitoring the health and well-being of ex-prisoners in Australia a longitudinal data linkage study.* \$269,000 (2006-2010).

Kinner, S. Strategic Awards (NHMRC). *Passports to advantage: Health and capacity building as a basis for social integration.* \$1,081,849.07 (2009-2011).

Kong F, Dietze P, Hellard M. Commonwealth Department of Health and Ageing. *Ecstasy and related drugs reporting system (EDRS).* \$48,000 (2005-2010).

Lehmann D and **Reeder J.** Wellcome Trust International Collaborative Research Grant. *Neonatal immunization with pneumococcal conjugate vaccine in PNG.* £940,000 (2005-2010).

Lim, M. Postdoctoral Fellowship (NHMRC). *Exploring innovative epidemiological research to understand sexually transmissible infections in large cohorts.* \$405,072 (2009-2012).

Mak J, Jaworowski A, da Fonseca Pereira C. Project Grant (NHMRC). *Does HIV function as a lipid-raft during infection?* \$582,750 (2008-2010).

Mattick RP, **Degenhardt L,** Mathers B, Howard J and Wodak A. United Nations Office on Drugs and Crime. *The Reference Group on HIV/AIDS and injecting drug use.* USD\$150,000 (2009-2010).

Moore D, **Dietze P,** Bammer G, Perez P. (NHMRC). *Understanding the barriers to improved access, engagement and retention of methamphetamine users in health services.* \$756,850 (2008-2011).

Morrissey, O. Project Grant, Merck Sharp & Dohme. *A randomised trial of diagnostic strategies for invasive Aspergillosis in at-risk hematology patients (ASPID Trial).* \$200,000 (2009-2011).

Pattison P, Robbins G, McBride E, **Hellard M.** ARC Discovery Grant. *The structure and dynamics of social contact for human disease transmission model.* \$550,000 (2009-2012).

Pedrana, A. Public Health Postgraduate Scholarship (NHMRC). *The Epidemiology of HIV among men who have sex with men (MSM) in Victoria.* \$85,827 (2009-2011).

Pietersz G, Apostolopoulos V. Project Grant (NHMRC). *Polynucleotide vaccine based on targeted delivery to antigen presenting cells.* \$518,250 (2008-2010).

Pietersz, G. Project Grant, The Cancer Council. *Cell penetrating peptide-mediated delivery of multiple CD8 and CD4 T cell epitopes for breast cancer vaccines.* \$277,038 (2008-2010).

Poumbourios P, Drummer H, Gorry P. Project Grant (NHMRC). *Delineation of receptor-activated conformational signalling pathways in HIV-1 envelope glycoproteins.* \$801,000 (2008-2010).

Poumbourios P, Drummer H, Wilce M. Project Grant (NHMRC). *Structural and functional role of HIV-1 gp41 terminal interactions in the membrane fusion mechanism.* \$508,500 (2009-2011).

Ramsland, P. Career Development Award (NHMRC). \$436,250 (2006-2010).

Ramsland P, Wines B. Project Grant (NHMRC). *Structural investigations of bacterial evasion of IgA mucosal and systemic immunity.* \$462,750 (2009-2011).

Reeder J and Barry A. Project Grant (NHMRC). *Population genomics of malaria surface antigen genes*. \$370,000 (2008-2010).

Reeder, J. Principal Research Fellowship (NHMRC). \$677,500 (2009-2013).

Reeder, J. (NHMRC). Uncoupled Research Fellowship Level PRF. \$677,500 (2009-2013).

Reeder J, Barry A. Project Grant (NHMRC). *Population genomics of plasmodium falciparum surface antigens*. \$370,500 (2008-2010).

Stratov, I. Postdoctoral Fellowship (NHMRC). *Role of HIV-specific natural killer cell mediated antibody-dependent cellular cytotoxicity in HIV infection progression*. \$274,000 (2007-2010).

Tachedjian, G. Fellowship (NHMRC). Uncoupled Research Fellowship SRFA. \$560,000 (2009-2013).

Tachedjian, G. Program Grant (NHMRC). *Investigating a novel generic Approach to Anti-Infective Agents*. \$70,068 (2008-2010).

Toole M, Hellard M, Pattison P, Sihavong A and Khoat D. ADRA. *Mapping sexual and social networks of men who have sex with both men and women in Laos and Vietnam, countries with concentrated HIV epidemics*. \$370,730 (2009-2010).

New Grants

Anderson, D. ACH2 Grant. *Quantitative determination of CD4+ T-cells at point of care*. \$160,000 (2010).

Churchill, M. Project grant (NHMRC): *Molecular studies of the astrocyte reservoir of HIV-1 in the central nervous system*. \$571,500 (2010-2012).

Crabb B, Gilson P and Leykauf K. Project Grant (NHMRC). *Signalling during red blood cell invasion by Plasmodium falciparum*. \$118,250 per year. (2010-2012).

Dietze, P. Senior Research Fellowship (ARC). \$800,000 (2010-2014).

Dore D, **Hellard M,** Kaldor J, Lloyd A and Haber P. NIH. *Treatment of recently acquired hepatitis C infection*. USD\$1.88 million (2010-2015).

Drummer, H. Project grant (NHMRC): *Structure and function of the Hepatitis C Virus glycoproteins*. \$577,500 (2010-2012).

Gilson P, Crabb B, Barry A, Reeder J, Hogarth M, Anderson D, Apostolopoulos V, Pietersz G, Ramsland P. Ramaciotti Foundation Equipment Grant. \$27,000 (2010).

Gorry, P. ACH2 Grant. *In vitro assay for HIV resistance to the CCR5 inhibitor Maraviroc*. \$144,000 (2010).

Gugasyan, R. Project grant (NHMRC). *NFKB1 is a regulator of CD8+ T cell development and memory cell generation*. \$422,400 (2010-2012).

Hellard M and Stoové M. Victorian Department of Human Services. *HIV Surveillance in Victoria*. \$408,780 (2010-2012).

Hellard M, Dietze P, Ritter A, Lubman D, **Kinner S,** Williams G, Dore G, Maher L, Moore D and **Power R.** Centre for Research Excellence (NHMRC). *Reducing the health, social and economic burden of injecting drug use in Australia*. \$2,485,060 (2010-2015).

Hellard M, Lewin S, Giles M and Price B. Department Health Victoria. *The Resolve C Support Program*. \$160,000 (2010-2011).

Hellard M, Stoové M and Bergeri I. NSW Health South Eastern Sydney. *A STI contract tracing literature review to inform STIPU work with GPS and clinics, as well as the review of the NSW Health contact tracing policy and next NSW STI strategy*. \$23,900 (2010).

Hellard M, Stoové M, Bergeri I, Pedrana A. Victorian Department of Human Services. *Outcome Evaluation of HIV prevention Initiatives 2010-2011 in Men who have Sex with Men, Victoria*. \$169,085 (2010-2011).

Hellard M, Cowie B, Wang J. Chris Silagy Research Scholarship (RACGP). *Improving diagnosis of Hepatitis B in General Practice*. \$19,927 (2010-2012).

Hellard, M. Contract research, Department of Health and Ageing. *EDRS, Ecstasy and Related Drug Reporting System*. \$48,000 (2010-2011).

Higgs P and Dietze P. State Trustees Foundation. *The health and social needs of older opiate users*. \$9,700 (2010).

Hinjen, M. ACH2 Grant. *High throughput screening and functional evaluation of HIV assembly/maturation inhibitors*. \$150,873 (2010).

Jaworowski, A. Project grant (NHMRC). *How white blood cells clear malaria infection, and how this alters the immune response*. \$544,500 (2010-2012).

Kinner S, Winter R and Kwarteng T. Pacific Islands HIV and STI Response Fund. *Monitoring HIV, risk behaviour and health service access among prisoners and ex-prisoners in Fiji*. \$125,000 (2010-2013).

Larance B, **Degenhardt L,** Mattick R, Lintzeris N, Ali R, Bruno R. Reckitt Benckiser. *Aberrant medication-related behaviours associated with opioid treatment: Developing a scale for use in multiple healthcare settings*. \$160,000 (2010-2011).

Lintzeris N, Ali R, Mattick RP, **Degenhardt L,** Haber P, Dunlop A and Williamson P. Reckitt Benckiser. *A randomised controlled trial to assess the acceptability of a switch from Suboxone sublingual tablets to Suboxone sublingual film*. \$506,712 (2010-2012).

Maher L, **Hellard M,** Prins M, Madden A, Kerr T, Page K. Project Grant (NHMRC). *Hepatitis C Vaccine Preparedness Study: Investing in Infectious Disease Prevention*. \$791,725 (2010-2013).

Achievements

Mak, J. Program grant, US NIH. *Elucidating the Interplay of Protease Substrate Recognition and Drug Resistance*. US\$191,268 (2010-2011).

Mak, J. Project grant (NHMRC): *Macrophages drives the diversity of HIV*. \$633,188 (2010-2012).

O Keefe, M. Project grant, CASS Foundation. *Dendritic cell populations of human bone marrow*. \$52,500 (2010).

Pickering R, Ffrench R, O'Keefe M, Hellard M. ACH2. *Can IL-28 / IL-29 production be used as a prognostic marker for Hepatitis C (HCV) outcome?* \$155,000 (2010-2011).

Reeder, J. Fogarty International. *International Global Infectious Disease Research Training Program award*. US\$750,000 (2010).

Sacks-Davis, R. Biomedical Postgraduate Scholarship (NHMRC). *Relationships between phylogeny of hepatitis C viruses and social network structure in a cohort of injecting drug users*. \$74,750 (2010-2012).

Salom V, **Kinner S**, Young G and Roach. DHS Victoria. *Monitoring substance use and risk behaviour at Schoolies week*. \$70,700 (2010).

Sterojovski, J. ACH2 Grant. *Rapid HIV-1 tropism testing using novel, soluble mimics of the HIV-1 coreceptors CCR5 and CXCR4*. \$110,000 (2010).

Stoové, M. ACT Government. *External Component of the evaluation of drug policies and services and their subsequent effect on prisoners and staff within the Alexander Maconochie Centre*. \$153,759.38 (2010).

Tachedjian, G. Project grant (NHMRC): *Silent Mutations in the HIV-1 Reverse Transcriptase Select during Anti-retroviral Therapy*. \$535,500 (2010-2012).

Vajdic C, Burns L, **Degenhardt L**, and Mao L. (NHMRC) *Opioid dependent persons in pharmacotherapy: Blood borne viruses and cancer risk*. \$86,250 (2010-2011).

Westhorpe, C. ACH2 Grant. *Markers of monocyte activation as correlates of Cardiovascular Disease in HIV patients*. \$150,000 (2010).

Winter, R. Biomedical Postgraduate Scholarship (NHMRC). *Examining drug-related morbidity and mortality and service utilisation among ex-prisoners*. \$74,750 (2010-2012).

Centre for International Health Current Grants

Chanlivong, N. ADB. HIV Prevention and Infrastructure: Mitigating risk in the Great Mekong Subregion. Sub-project 1 Expanded HIV Prevention Program on Lao Northern Economic Corridor (Route 3) (2008-2010). (Laos). \$857,143 (2009-2011).

Chanlivong, N. Equity Trustees. Lao working womens HIV and STI Response. (Laos). \$50,000 (2008-2010).

Chanlivong, N. Oxiana Lane Xang Minerals Ltd (LXML). Laos, Mother and Child Health Project. (Laos). \$523,341 (2008-2011).

Chanlivong, N. PACT Men who have sex with Men peer outreach activities IV. (Laos). \$73,333 (2007-2011).

Dorning, K. AusAID. Integrated Psychosocial Support for Sexual Reproductive Health - Cyclone Nargis. (Burma). \$800,000 (2008-2010).

Dorning, K. AusAID. Strengthening HIV responses through partnership. (Burma). \$1,917,132 (2007-2012).

Dorning, K. Burma Project. Local resource centre - Cyclone Nargis. (Burma). \$1,940,000 (2008-2010).

Dorning, K. UNOPS. 3 Diseases Fund - reducing the burden of communicable disease morbidity/mortality in the area of HIV/AIDs. (Burma). \$3,726,796 (2007-2011).

Fischer, A. AusAID. Tingim Laip: Interim Management and Oversight Arrangements for Tingim Laip. (PNG). \$599,986 (2009-2010).

Hagerty, C. Canada Fund. Prevention education among workers exposed to the highest risk of contracting HIV. (China-Tibet). \$51,347 (2009-2010).

Holmes, W. AusAID, Menzies and UoM. Women and Children's Health Hub - collaboration with Menzies and Centre for International Child Health (University of Melbourne). \$6,000,000 (2008-2011).

Kwarteng, T. SPC. Implementation of the Pacific regional Strategic Implementation Plan II. (Pacific). \$449,800 (2009-2012).

Morgan, A. Oxfam. ANTARA HIV Technical Assistance. (Indonesia). \$66,824 (2009-2010).

Morgan, C. AusAID. China-Australia Health and HIV/AIDS Facility. (China). \$31,800,000 (2007-2012).

Morgan, C. Robert Christie Foundation. Project in Partnership with Braille without Borders (BWB) to establish a school in Kerala India. (India). \$31,000 (2009).

Morgan, C. University of Queensland. The investment Case for closing the gap: financing equitable progress towards the Millenium Development Goals. \$211,364 (2009 -10).

Natoli, L. AusAID. PNG-Australia Sexual Health Improvement Program. (PNG). \$2,444,003 (2007-2011).

Natoli, L. SPC. Piloting of a strategy to integrate point of care testing into current PICT responses to STIs and HIV. (Pacific). \$205,400 (2009-2011).

O'Neill, S. Baker IDI Heart and Diabetes Institute. Provision of experience and capacity in relation to the pursuit of, and management of, international development opportunities. (Australia). \$100,000 (2009-2010).

Power, R. AusAID. Investigating the role of drug and alcohol use in the spread of HIV and other STIs in Pacific. (Pacific). \$112,750 (2008-2010).

Power, R. GRM. HIV Cooperation Program for Indonesia. (Indonesia). \$1,000,000 (2008-2013).

Power, R. Salvation Army (NSW). Situational Assessment of Drug and Alcohol issues and responses in the Pacific Region. (Pacific). \$98,670 (2008-2010).

Renkin, L. Australian Red Cross. Tibet Health Sector Support Program. (China-Tibet). \$2,000,000 (2004-2010).

Renkin, L. WVA. Funding of Partner for continuation of health activities in Aceh. (Indonesia). \$350,000 (2009-2010).

Toole, M. AusAID. Modelling Sexual and Social Networks of Urban Men who Have Sex with Men and Women in Vietnam and Lao PDR. (Mekong Delta). \$370,730 (2009-2011).

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Anderson, D. *Case studies in Global Health – Diagnostic technology development and validation.* International Biotechnology Organisation (BIO2010), Chicago, Illinois, USA (2010).

Anderson, D. *Development of a Rapid, point-of-care immunochromatographic test for measurement of CD4 T-cells.* Rush University, Chicago, Illinois, USA (2010).

Anderson, D. *Development of a Rapid, point-of-care immunochromatographic test for measurement of CD4 T-cells.* Duke University, Durham, North Carolina, USA (2010).

Anderson, D. *Development of a Rapid, point-of-care immunochromatographic test for measurement of CD4 T-cells.* Cincinnati Children's Memorial Hospital, Cincinnati, USA (2010).

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Anderson, D. *Information and technology exchange in diagnostics for infectious diseases.* China International Technology Transfer Conference, Nanjing, China (2010).

Anderson, D. *New methods for measurement of CD4 T-cells in monitoring of HIV/AIDS.* Department of Microbiology, Tsinghua University, Beijing, China (2010).

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Apostolopoulos, V. *MS immunotherapy - from bench to bedside.* 11th International Conference in Medicinal Chemistry: Drug Discovery and Design, Conference. University of Patras, Dept of Chemistry and Pharmacology. Patras, Greece (2010).

Audsley, J. *Factors associated with hepatotoxicity in an international HIV/HBV co-infected cohort on long-term HAART.* 17th Conference on Retroviruses and Opportunistic Infections, San Francisco, USA (2010).

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Bergeri, I. *A Multi-Network Sentinel Surveillance System to Tackle STIs: The Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance.* ESCAIDE conference, Lisbon, Portugal (2010).

Bergeri, I. *Integrated HIV/STIs bio-behavioural survey in an "isolated" low level concentrated epidemic setting: methods in Vanuatu.* ESCAIDE conference, Lisbon, Portugal (2010).

Cherry, CL. *HIV – associated neuropathy – an old problem revisited.* HIV Education Meeting, Chelsea and Westminster Hospital, London, UK (2010).

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Crabb, B. *A common protein export pathway in malaria parasites.* Parasite to Prevention – Advances in the understanding of malaria Conference, Heriot-Watt University, Edinburgh UK (2010).

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Crowe, SM. *Intima media thickness is increased in HIV – infected individuals: contribution of monocytes.* Séminaire Exceptionnel (Symposium): Hôpital Pitié – Salpêtrière Service des Maladies Infectieuses et Tropicales, Paris, France (2010).

Crowe, SM. *Low cost viral load tests in resource constrained countries.* 3rd National Conference of AIDS Society of India. Hyderabad, India (2010).

Crowe, SM. *Opportunistic infections in HIV.* 2nd National Congress on Tropical and Infectious Diseases Bali. Plenary Speaker. Indonesia (2010).

Crowe, SM. *Solving challenges in global health diagnostics, creating opportunities in global markets.* BIO International Convention, Chicago, United States (2010).

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Degenhardt, L. *Update: Progress on the work of the Mental Disorders and Illicit Drug Use Expert Group.* Global Burden of Disease Expert group meeting, Seattle (2010).

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Dietze P, Room R, Ferris J. *Who suggests drinking less? Demographic and national differences in informal social controls on drinking.* Paper presented at the Kettil Bruun Society Annual Conference, Lausanne, Switzerland. (2010).

Gerondakis S. *Cross-talk between the NF- κ B and ERK pathways in innate immune function.* Aegean Conference on Innate Immunity, Greece (2010).

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Gorry, P. *Where and what are viral reservoirs session.* XVIII International AIDS Society Conference. Invited Chair. Vienna, Austria (2010).

Gray, N. *Identifying the reproductive health information and service deliver preferences of adolescents in Vanuatu.* Family Planning Conference. Wellington, New Zealand (October 2010).

Hellard M, Sacks-Davis R, **Higgs P, Bharadwaj M, Bowden DS, Drummer H, Aitken C.** *Elispot testing shows very few injecting drug users avoid hepatitis C virus exposure.* The International Liver Congress, Vienna (2010).

Hellard M, Sacks-Davis R, **Higgs P, Spelman T, Pedrana A, Bharadwaj M, Bowden S, Drummer H, Aitken C.** *Hepatitis C infection, clearance and reinfection in a cohort of injecting drug users - a highly dynamic process.* The International Liver Congress, Vienna, Austria (2010).

Hellard, M. *Hepatitis C infection, clearance and reinfection in a cohort of injecting drug users.* EASL, Vienna, Austria (2010).

Hellard, M. *Sex, drugs and rock and roll. Using innovative methods to understand disease transmission and health promotion.* Pasteur Institute Paris, France (2010).

Hellard, M. *The Myths and Realities of Hepatitis C in Injecting drug users.* International Harm Reduction Conference. Plenary Speaker. Liverpool, UK (2010).

Higgs P, Aitken C, Hellard M, Maher, L. *Luck, chance and good fortune: Accounts of long-term injectors staying safe from hepatitis C in Melbourne.* IHRA 21st International Conference: Harm Reduction: The next generation. Liverpool, UK (2010).

Hogarth, M. *Discussion of what we know of the unique biology and how to manipulate FcR biology and their interaction with IgG in the engineering of next generation therapeutic monoclonal antibodies.* Gordon Conference, United States (2010).

Hogarth, M. *Genomic and proteomic analyses of pathological T cells in Fc receptor transgenic mice and human rheumatoid joints.* FASEB Summer Research Conferences, United States (2010).

Hogarth, M. *Immunoreceptors in Disease.* FASEB Summer Research Conferences. Session Chair. United States (2010).

Hogarth, M. *Roles of Fc Receptors and immune complexes in the heterogeneity of autoimmune arthritides.* Immuno2010 Brazilian Society For Immunology, Brazil (2010).

Hogarth, M. *SASPITIS - signals and signal processing in the immune system.* Plenary Speaker. Hungary (2010).

Katsara M and **Apostolopoulos V.** *Altered peptide ligands of myelin basic protein mutants conjugated to reduced mannan modulate immune responses in mice.* 11th International Conference in Medicinal Chemistry: Drug Discovery and Design, Conference. University of Patras, Dept of Chemistry and Pharmacology. Patras, Greece (2010).

Kinner, S. *Improving the health status of ex-prisoners: Hard lessons learned in reviewing complex interventions with multiple outcomes.* Joint Colloquium of the Cochrane and Campbell Collaborations, Keystone, CO, United States (2010).

Kinner, S. *Polymorbidity and mortality among justice-involved youth: Implications for re-entry.* Centre for Evidence-Based Crime Policy, George Mason University: Congressional briefing: Juvenile Justice. Washington, DC, United States (2010).

Kinner, S. *Supporting systematic reviews and hypothesis generation through open access libraries and automated knowledge analyses: Training in tool usage and examples from the Justice Health Field.* Joint Colloquium of the Cochrane and Campbell Collaborations, Keystone, CO, USA (2010).

Kinner, S. *Two steps forward, one step back: Justice Health research, policy and practice in Australia.* International Network for Justice Health Conference, Phoenix AZ (2010).

Kinner, S. *Young prisoners: A critical group for health research?* 2010 International Network for Justice Health Conference, Phoenix AZ, Unites States.

Lewin, SR. *Adaptive immunity in the liver.* Asia Pacific Association for the Study of Liver Disease. Invited Symposium Speaker. Beijing, China (2010).

Lewin, SR. *Establishing and reversing latency: towards a cure for HIV.* HIV Pathogenesis Program University Kwazulu Natal Biannual Retreat. Keynote Speaker. Durban, South Africa (2010).

Lewin, SR. *HIV eradication and cure: HIV DART.* Invited Plenary Speaker, Los Cabos, Mexico (2010).

Lewin, SR. *Management of HIV - HBV co-infection.* 13th HIV Bangkok Symposium. Invited Plenary Speaker. Bangkok, Thailand (2010).

Lewin, SR. *Pathogenesis of hepatic flare in HIV – hepatitis B virus co-infection.* 4th Ditan International Conference on Infectious Diseases. Invited Plenary Speaker, declined, Beijing, China (2010).

Lewin, SR. *State of the epidemic: towards a cure.* XIII International AIDS Conference. Invited Plenary Speaker. Vienna, Austria (July 2010).

Lewin, SR. *Towards a Cure: HIV Reservoirs and Strategies to Control them.* AIDS 2010: why & what? Vienna, Austria (2010).

Lim MSC, **Gold J,** Hocking JS, **Aitken CK,** Keogh L, Fairley CK, Jordan L, **Stoové M,** **Spelman TD,** Lewis J, **Hellard ME.** *TXT 4 Sexual Health Promotion: Demonstrating efficacy and effectiveness in two trials.* XVIII International AIDS Conference, Vienna, Austria (2010).

Mak, J. *Biology of HIV assembly and uncoating.* Department of Microbiology, University of Pennsylvania, Philadelphia, USA (2010).

Mak, J. *Biology of HIV assembly and uncoating.* Department of Microbiology and Immunology, Pennsylvania State University College of Medicine, Hershey, USA (2010).

Mak, J. *Biology of HIV assembly and uncoating.* Department of Microbiology, Case Western Reserve University, Cleveland, USA (2010).

Mak, J. *Biology of HIV assembly and uncoating.* Li Ka Shing Institute of Health Sciences, The Chinese University of Hong Kong, China (2010).

Mehlman-Orozco, Olaghere, Douds, Chirieleison, Gallagher, **Kinner S.** *Supporting systematic reviews and hypothesis generation through open access libraries and automated knowledge analyses: Training in tool usage and examples from the Justice Health Field.* Joint Colloquium of the Cochrane and Campbell Collaborations, Keystone, CO, United States (2010).

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O’Keeffe, M. A dendritic cell workshop for early career postdocs and students. DC-Crest201. Celerina, Switzerland (March 2010).

O’Keeffe, M. Proteomic Analyses reveal differential sensing of cytoplasmic viruses by dendritic cell subsets. DC2010: Forum on Vaccine Science, 11th Symposium on Dendritic Cells in Fundamental and Clinical Immunology. Lugano, Switzerland (September 2010).

Pedrana A, Hellard H, El-Hayek C, Stoové M. *The effectiveness of social marketing campaigns in changing HIV/STI risk behaviour among MSM in Australia.* Presented at XVIII International AIDS Conference. Vienna, Austria (2010).

Pedrana A, Hellard M, Wilson K, Guy R, Prestage G, Best S, Stoové M. *HIV Prevalence, Knowledge of HIV status and unrecognised infection among men who have sex with men in Australia.* XVIII International AIDS Conference. Vienna, Austria (2010).

Petoumenos K, **Hellard M**, Lloyd A, Maher L, Kaldor J, Haber P, van Beek I, Matthews G, Dore G; Salehi Alavi M, Grebely J. *Depression prior to and during treatment for recent hepatitis C virus (HCV) infection among HCV and HCV/HIV participants in the ATAC study.* 12th International Workshop on Adverse Drug Reactions and Co-morbidities in HIV. London (2010).

Ramsland, PA. *Bacterial protein binding sites on immunoglobulins: inhibitory bridges between adaptive and innate immunity.* 7th International Conference on Innate Immunity (Aegean Conferences), Rhodes, Greece (July 2010).

Reeder, J. *Pneumonia: 40 years of research in PNG.* Session Chair and Panellist, Goroka, PNG (2010).

Schmich, L. *Exploring the potential for customary law to provide a vehicle for drug diversion programs in Vanuatu.* OCEANIC TRANSFORMATIONS The Third Conference of the Australian Association for the Advancement of Pacific Studies, (April 2010).

Stoové M, El-Hayek C, Guy R, Goller J, Wilkinson A, Gouillou M, Spellman T, Hellard M. *Incidence and transmission risks for HIV, syphilis and chlamydia in men who have sex with men: Findings from a primary care sentinel surveillance network in Victoria, Australia.* Presented at XVIII International AIDS Conference. Vienna, Austria (2010).

Stoové M, El-Hayek C, Pedrana A, Higgins N, Breschkin A, Hellard M. *Evidence of diversifying HIV epidemiology in Australia: the emergence of new risk populations?* XVIII International AIDS Conference. Vienna, Austria (2010).

Tachedjian, G. *Activity of acid stable dendrimer microbicide and lactic acid.* NIH Face to Face Meeting, Bethesda, Maryland, USA (2010).

Tachedjian, G. *Lactic acid as a natural microbicide with HIV virucidal activity.* Microbicides: Building bridges in HIV Prevention, Pittsburgh, Pennsylvania, USA (2010).

Tachedjian, G. *Microbicides for the prevention of HIV and other STIs.* University of Pittsburgh School of Medicine, Department of Medicine, Division of Infectious Diseases, Pittsburgh, Pennsylvania, USA (2010).

Winter R, Quinn B, Kirwan A, Stoové M. *Back on the ‘horse’: injecting drug use in the immediate post-prison release period. Results from a prospective cohort study in Melbourne, Australia.* International Conference on the Reduction of Drug Related Harm, BT Convention Centre. Liverpool, United Kingdom (April 2010).

Wright, EJ. Grund B, Robertson K, Roediger M, Brew B, Drummond F, Pumpradit W, Shlay J, Penalva de Oliveira A, Price R, and for the INSIGHT SMART Study Group. *Cardiovascular disease and cardiovascular disease risk factors are associated with lower baseline neurocognitive performance in the Strategies for Management of Antiretroviral Therapy (SMART) Neurology Substudy.* Invited Symposia Speaker. 17th Conference on Retroviruses and Opportunistic Infections. San Francisco, (February 2010).

Wright, EJ. *HIV associated neurocognitive disorders.* PNG Sexual Health Society Annual Meeting. Invited speaker. Wewak Papua New Guinea, (September 2010).

Wright, EJ. *HIV Neurology – Still a challenge.* HIV Congress. Invited Plenary Presentation. Mumbai, India (January 2010).

Wright, EJ. *Overview of HIV and Neurological Diseases.* 46th PNG Medical Symposium. Invited plenary speaker. Wewak Papua New Guinea, (September 2010).

Presentations

National

Anderson, D. *Development of a Rapid, point-of-care immunochromatographic test for measurement of CD4 T-cells.* Medical Research and Commercialisation Fund, Annual Meeting, Melbourne (2010).

Anderson, D. *Development of a Rapid, point-of-care immunochromatographic test for measurement of CD4 T-cells.* Australian Society for HIV Medicine, Sydney (2010).

Anderson, D. *Development of a Rapid, point-of-care immunochromatographic test for measurement of CD4 T-cells.* Australian Society for Microbiology, Sydney (2010).

Anderson, D. *STI Point-of-care tests: Performance and use, or what needs to be done before their widespread use.* Australian Society for HIV Medicine, Sydney (2010).

Anderson, JL. *Probing APOBEC3 restriction of early HIV-1 replication.* Australian Centre for HIV and Hepatitis Virology Research 6th Annual Workshop, Yarra Valley (2010).

Anderson, JL. *Probing APOBEC3 restriction of early HIV replication.* Shining the Light on Infectious Diseases Symposium. Burnet Institute, Melbourne (2010).

Andrews J, Winter R, Jenkinson R, Kinner S. *Understanding drug-related deaths in recently released ex-prisoners*. The Australian Professional Society on Alcohol and Other Drugs 2010 Conference, National Convention Centre, Canberra (2010).

Apostolopoulos, V. *12 years follow-up of early breast cancer patients immunised with mannan-MUC1*. Melbourne Human Immunology Meeting, Monash University, AMREP (2010).

Apostolopoulos, V. *12 years follow-up of patients immunised with mannan-MUC1*. Synergy Symposium: Blood Diseases and Cancer, Monash University, AMREP (2010).

Ata N, Pedrana A, Gold J, Hellard M, Nguyen P, Chang S, Benda P, Crang O, Howard S, **Stoové M.** *Iterative evaluation methods for health promotion interventions on social networking sites: The new frontier*. Presented at Australasian Sexual Health Conference, Sydney (2010).

Audsley, J. *HIV – HBV co-infection*. Forbes Week. Alfred Hospital, Melbourne (2010).

Bergeri I, Heywood SM, **El-Hayek C,** **Horyniak D,** **Lemoh C,** **Breschkin A,** **Higgins N,** **Stowe S,** **Stoové M,** **Hellard M.** *Ten years of HIV In Victoria, Australia (1999-2008): An Evolving Epidemic*, PHAA conference (Public Health Association Australia), Adelaide (2010).

Bergeri, I. *Influenza: What do the first 1,000 notified cases tell us about transmission of pandemic (H1N1) 2009 influenza in Victoria, Australia? Role of youth through schools in transmission*. Australia (2010).

Bergeri, I. *Novel methodological approaches to outbreak surveillance and investigation: "A surveillance network on BBVs and STIs using record linkage: findings after 3 years of implementation in Victoria, Australia*. Australia (2010).

Chew CSN, **Cherry CL,** Lim AYF, Kamarulzaman A, Tan HY, Aghafar Z, Price P. *Plasma chemokine levels CCL5, CXCL10 are altered in Malaysian HIV patients on Highly Active Antiretroviral Therapy*. Australasian Society for HIV Medicine Annual Meeting, Sydney (2010).

Crabb, B. *A common protein export pathway in malaria parasites*. Queensland Institute of Medical Research, Brisbane (2010).

Crabb, B. *A common protein export pathway in malaria parasites*. India – Australia Biotechnology Conference, Brisbane (2010).

Crabb, B. *Cell signalling in malaria*. School of Medicine, Deakin University, Melbourne (2010).

Crowe, SM. *Ageing and cardiovascular disease in HIV infected individuals*. Forbes Week. Alfred Hospital, Melbourne (2010).

Crowe, SM. *HIV Clinical Training in India/Laos/Burma – opening the door to research*. Centre for Virology Symposium "Research in the Region", Burnet Institute, Melbourne (2010).

Degenhardt, L. *Drug use and sexual behaviour: A brief review of levels and trends among teenagers*. Presentation at the Royal Children's Hospital Research week. Melbourne (2010).

Degenhardt, L. *International data on illicit drug use: What do we know?* Invited keynote presented at the Australian National Drug Trends Conference. Sydney (2010).

Drummer, H. *Biochemical and immunological studies on the Hepatitis C Virus glycoprotein E2 core domain*. Australian Health and Medical Research Congress, Melbourne (2010).

El-Hayek C, Gold J, Goller J, Gouillou M, Bergeri I, Hellard M and Stoové M. *Trends in testing for sexually transmitted infections among men who have sex with men*. Presented at Public Health Association of Australia 40th Annual Conference, Adelaide (2010).

Ellenberg P, Chan D, **Pereira CF,** Davenport M, **Mak J.** *Understanding the intracellular life-cycle of HIV replication*. ACH2 Meeting, Yarra Valley (2010).

Fillipas S, Holland A, **Cherry CL,** Cicutini F. *The effects of exercise training on metabolic and morphological outcomes for people living with HIV: a systematic review of randomized controlled trials*. Australasian Society for HIV Medicine Annual Meeting, Sydney (2010).

Fischer A, Power R and Thomson N. *Regional Amphetamine Type Substance (ATS) use: building research capacity to inform public health interventions*. Australasian Professional Society on Alcohol and other Drugs, Canberra (November 2010).

Gavin AL and Martinic MM. *A role for NOD1 and NOD2 genes in CD8 T lymphocyte thymic positive selection*. The Australasian Society for Immunology Conference, Perth (2010).

Gerondakis, S. *c-Rel control of regulatory T-cell development*. ThymOz, Queensland (2010).

Gerondakis, S. *Controlling regulatory T-cell development*. Australian Health and Medical Research Congress, Melbourne (2010).

Gilson, P. *Characterisation of PTEX: the malaria protein export machine*. The Australian Health and Medical Research Congress, Melbourne (2010).

Gold J, Pedrana A, Stoové M, Ata N, Chang S, Crang O, Keogh L, Hocking J, Howard S, **Hellard M.** *The FaceSpace Project: Delivering Sexual Health Promotion on Social Networking Sites*. Public Health Association of Australia 40th Annual Conference. Adelaide (2010).

Gold J, Pedrana A, Stoové M, Howard S, Chang S, Benda P, Crang O, Keogh L, Hocking J, **Hellard H.** *Using Social Networking Sites for Sexual Health Promotion to Young People: The FaceSpace Project*. Australian Health Promotion Conference, Melbourne (2010).

Achievements

Hearps, AC. *HIV and accelerated ageing of the innate immune system, Oral Presentation.* Australian Centre for HIV and Hepatitis Virology Research (ACH2) Conference, Yarra Valley (2010).

Hellard, M. *Hepatitis C infection, clearance and re-infection in a cohort of injecting drug users – a highly dynamic process.* 7th Australasian Viral Hepatitis Conference, Melbourne (2010).

Hellard, M. *Preventing hepatitis C transmission in the community – a multidisciplinary approach.* Victorian Infection and Immunity Strategic Workshop, Lorne (2010).

Hellard, M. *The Resolve C study.* Cabrini Hospital Ground Round, Melbourne (2010).

Hellard, M. *Hepatitis C infection, clearance and re-infection in a cohort of injecting drug users – a highly dynamic process.* NRL National Workshop, Melbourne (2010).

Hellard, M. *Hepatitis C infection, clearance and re-infection in a cohort of injecting drug users – a highly dynamic process.* Alfred Hospital Gastroenterology Seminar, Melbourne (2010).

Hellard, M. *HIV Epidemiology – why a clinician should care.* World Congress of Internal Medicine, Melbourne (2010).

Hellard, M. *Mapping sexual and social networks of men who have sex with both men and women in Laos, a country with a concentrated HIV epidemic.* NHMRC Global Health Meeting, Canberra (2010).

Hellard, M. *More than just counting – the importance of developing linked and integrated surveillance systems to inform the public health response to STIs and BBVs.* NRL National Workshop, Melbourne (2010).

Hellard, M. *Myths and reality: Managing hepatitis C in people who inject drugs.* 7th Australasian Viral Hepatitis Conference, Melbourne (2010).

Hellard, M. *Reducing the impact of Hepatitis C – Deciphering how and why it spreads, and improving treatment outcomes.* Fenner Lecture, Burnet Institute, Melbourne (2010).

Hellard, M. *The Networks Study – using a social network approach to understand hepatitis C transmission and immunity in injecting drug users.* Monash University AMREP Symposium, Melbourne (2010).

Hellard, M. *The Networks study. Understanding hepatitis C transmission and clearance in a cohort of people who inject drugs.* Monash Medical Centre, ID Seminar, Melbourne (2010).

Higgs P, Winter R. *Film as a tool of reducing drug related harm, Building on the Capital.* 30th APSAD Conference, Canberra (2010).

Higgs, P. *Engagement with drug users in an active street market: what difference does 14 years make?* Talking Through Glass Symposium, Melbourne University (2010).

Higgs, P. *Film and photos: Tools for reducing drug related harm.* 8th Dangerous Consumptions Conference, ANU, Canberra (2010).

Higgs, P. *Posters and Films at IHRA 2010, Stories of the Next Generation.* Australian Perspectives on Harm Reduction 2010, Melbourne (2010).

Higgs, P. *Shifting the Hep C prevention paradigm to include people of diverse cultural backgrounds, The culture of prevention: hepatitis C among people from culturally and linguistically diverse backgrounds.* National Centre in HIV Social Research Consortium Workshop 3, Sydney (2010).

Hijnen M, Cowieson N, Heaton S, Pereira CF, Hartkamp L, Spiegel M, Sawyer A, Wilce J, Wilce M, Mak J. *Maturation induce a structural reorganization of the HIV Gag polyprotein.* ACH2 Meeting, Yarra Valley (2010).

Hogarth, M. *Burnet Commemorative symposium: 21st Century Immunology,* Melbourne. Conference Convenor (2010).

Hooker DJ, Mobarok M, Ellett AM, Cherry CL. *Absolute apoptosis measurement from minute tissue samples by merging ligation – mediated PCR and qPCR.* 5th Australian Health and Medical Research Congress, Melbourne (2010).

Jaworowski, A. *HIV: from AIDS to chronic inflammatory disease.* Peter MacCallum Institute, Melbourne (2010).

Jenkinson R, Kinner S. *Substance use and health after release from prison: Pre-release expectations and the realities of life on the outside.* ANEX 2010 Australian Drugs Conference: Public Health and Harm Reduction, Melbourne (2010).

Johnson, A. *Lactic acid is a natural vaginal defence factor against HIV-1 and HSV-2.* Australian Centre for HIV and Hepatitis Virology Research 6th Annual Workshop, Yarra Valley (2010).

Jones KL, Hirst B, Pereira CF, Mak J. *A novel oligo-based fluorescent in situ hybridization (O-FISH) technique for the detection of single copy HIV-1 nucleic acids.* ACH2 Meeting, Yarra Valley (2010).

Kinner S, Forsyth, Andrews. *Impact of a prolonged heroin shortage on drug-related mortality in ex-prisoners.* Australian Mortality Data Interest Group Workshop, Melbourne (2010).

Kinner S, Richards. *Passports to Advantage: Transitional care for ex-prisoners in Queensland.* Correctional Services Healthcare Summit, Melbourne (2010).

Kinner, S. *Monitoring and improving the health of ex-prisoners with and without intellectual disability: A randomised controlled trial.* 45th Annual Conference of the Australasian Society for the Study of Intellectual Disability, Brisbane (2010).

Kinner, S. *Understanding drug-related death in recently released prisoners.* Australasian Professional Society on Alcohol and other Drugs (APSAD) 30th Annual Conference, Canberra (2010).

Kinner, S. *Development and evaluation of an intervention to improve the health of ex-prisoners: The Passports project.* Reintegration Puzzle Conference, Hobart (2010).

Kinner, S. *Impact of a prolonged heroin shortage on drug-related mortality in ex-prisoners.* Australian Mortality Data Interest Group Workshop, Melbourne (2010).

Kirwan A, Stoové M, Quinn B, Winter, R. *Getting out and getting on ... but not getting services.* Presented at The Australian Professional Society on Alcohol and Other Drugs Conference, Canberra, Australia (2010).

Kirwan A, Winter R, Quinn B, Stoové M. *Stories from the fringe: ex prisoners and experiences of release.* The Anex 2010 Australian Drugs Conference: Public Health and Harm Reduction, Melbourne, Australia (2010).

Kong FYS, Guy R, Boyle D J, Merritt T, Spelman T, Bergeri I, Hocking JS, Britt H, Lau P, Pirotta MV, Heal C, Brett T, Kaldor J, Donovan B, Hellard ME. *Testing for Chlamydia at Australian General Practices: The Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance (ACCESS).* Australasian Sexual Health Conference, Brisbane (2010).

La, J. *Targeting HIV-1 reverse transcriptase using fragment screening.* 22nd Annual Conference of the Australasian Society for HIV Medicine, Sydney (2010).

La, J. *Targeting HIV-1 reverse transcriptase using fragment screening.* Australian Centre for HIV and Hepatitis Virology Research 6th Annual Workshop, Yarra Valley (2010).

Lewin, SR. *Pathogenesis of HIV – hepatitis B co-infection.* 7th Australasian Conference on Viral Hepatitis, Melbourne (2010).

Lewin, SR. *The role of chemokines in establishing HIV latency.* Australasian HIV Medicine Conference (invited plenary speaker, declined), Sydney (2010).

Leykauf, K. *Protein kinase A dependent phosphorylation of AMA1 plays an important role in RBC invasion.* XIth International Congress of Parasitology (ICOPA), Melbourne (2010).

Lichtfuss, G. *Natural killer cells, HIV infection and immune activation.* Oral Presentation – Australian Centre for HIV and Hepatitis Virology Research (ACH2) Conference, Yarra Valley (2010).

Loveland, BE. *MUC1 Dendritic Cell vaccines in ovarian cancer: Overview and introduction to the CVac trial CAN – 003.* Ovarian Cancer Symposium – from Bench to Bedside. Department of Gynaecological Oncology, Royal Adelaide Hospital, Adelaide (2010).

Mak, J. *Biology of HIV assembly and uncoating.* Institute for Biotechnology of Infectious Diseases, University of Technology, Sydney (2010).

Mak, J. *Biology of HIV assembly and uncoating.* School of Medicine, Deakin University, Geelong (2010).

Mak, J. *Diversification of HIV.* Australian Society for Microbiology Annual Meeting, Sydney (2010).

McNamee K, **El-Hayek C, Gouillou M, Goller J, Gold J, Bergeri I,** Fairley K, Timms J, Milner R, Hellard M, Stoové M. *Chlamydia testing and risk factors among women: should women aged over 30 years be routinely screened for genital chlamydia infection?* PHAA 40th annual conference, Adelaide (2010).

Morgan, C. *Primary health care prioritising women and children delivers MDGs.* 63rd Annual UN DPI/NGO Conference, Melbourne (September 2010).

Morgan, C. *Community-based care at childbirth to promote maternal and newborn survival: a review of the evidence and its application to high-mortality sites in our region.* Global Health Conference. Alfred Medical Research and Education Precinct (April 2010).

Natoli LJ. *HIV and Maternal Mortality. Speaker within workshop session – Improving Maternal Health: Tackling Determinants as part of an Integrated Approach.* 63rd UN DPI/NGO Conference, Melbourne (2010).

Nelson K, Apostolopoulos V, Day S, Haines J, Stojanovska L. *The effect of Maca (Lepidium meyenii) on plasma blood glucose and cytokine patterns in postmenopausal Hong Kong Chinese women.* Asian Pacific Menopause Federation, (September 2010).

Nguyen P, **Gold J, Pedrana A, Stoové M, Ata N,** Crang O, Chang S, Benda P, Howard S, **Hellard M.** *Going Where The People Are: Reaching Young People And MSM For Sexual Health Promotion Via Social Networking Sites.* Sexual Health Conference, Sydney (2010).

O’Keefe D, Dietze P, Jenkinson R, Higgs P. *Psychiatric pharmaceutical use by a cohort of people who inject drugs: links to personal wellbeing.* Paper presented at the Annual Conference of the Australasian Professional Society on Alcohol and Drugs, Canberra (2010).

O’Keefe, M. *Dendritic cell overview.* IgV Masterclass, AMREP (August 2010).

O’Keefe, M. *Proteomic Analyses reveal differential sensing of cytoplasmic viruses by dendritic cell subsets.* Department of Immunology and Microbiology, University of Melbourne (April 2010).

Papanastasiou C, Dietze P, Jenkinson R and Higgs P. *IDU experience of assault: results from the Melbourne Injecting Drug User Cohort Study (MIX), Building on the Capital.* 30th APSAD Conference, Canberra (2010).

Achievements

Papanastasiou C, Dietze P, Jenkison R, Higgs P. *The experience of assault among people who inject drugs: results from the Melbourne Injecting Drug User Cohort Study (MIX).* Paper presented at the Annual Conference of the Australasian Professional Society on Alcohol and Drugs, Canberra (2010).

Pedrana A, Gold J, Hellard M, Nguyen P, Chang S, Benda P, Crang O, Howard S, Stoové M. *Adapting Evaluation Methods for Health Promotion Interventions on Social Networking Sites.* Public Health Association of Australia 40th Annual Conference, Adelaide (2010).

Pedrana A, Gold J, Hellard M, Nguyen P, Chang S, Benda P, Crang O, Howard S, Stoové M. *Adapting Evaluation Methods for Health Promotion Interventions on Social Networking Sites.* Presented at Public Health Association of Australia 40th Annual Conference, Adelaide (2010).

Pedrana A, Gold J, Stoové M, Bartrouney C, Asselin J, Crang O, Chang S, Howard S, Hellard M. *Where have all the men gone? Reaching Gay Men for Sexual Health Promotion via Social Networking Sites with Iterative Evaluation Methods.* Presented at Australasian Sexual Health Conference 2010, Sydney, Australia (2010).

Pedrana A, Hellard M, Guy R, Stoové M. *Understanding Risk: Lessons from the Evaluation of HIV Prevention initiatives in Victoria and learning's from gay men through a younger perspective.* 11th Social Research Conference on HIV, Hepatitis C and Related Diseases, Sydney (2010).

Pedrana A, Stoové M, El-Hayek C, Batrouney C, Asselin J, Hellard M. *The effectiveness of social marketing campaigns in changing HIV/STI related behaviour among gay men in Australia.* Presented at Australasian HIV/AIDS Conference, Sydney (2010).

Pereira CF, Jones KL, Ellenberg PC, Vivet-Boudou V, Marquet R, Johnson I, Mak J. *Dynamics of viral proteins during the natural HIV-1 infection – insights from a biarsenical-tetracycline fluorescent labelling method.* ACH2 Meeting, Yarra Valley (2010).

Pietersz, GA. *Immunogenicity of Novel Tripartite Cell Penetrating Peptides Incorporating MUC1.* 3rd Australian Vaccines & Immunotherapeutic Development, Brisbane (2010).

Pietersz, GA. *MUC1: Potential target for multiple myeloma.* Synergy Symposium: Blood Diseases & Cancer, Melbourne (2010).

Poumbourios, P. *Studies on the membrane fusion activation synapse of the HIV-1 envelope glycoproteins, gp120 – gp41.* OzBio 2010. Melbourne (2010).

Quinn B, Dietze P, Papanastasiou C, Stoové M. *A prospective cohort study of regular methamphetamine users: related harms and population-based complexities.* APSAD Conference, Canberra (2010).

Reddel S, Bourne C, Stoové M, Hellard M, Kelly P. *Partner notification of sexually transmitted infections: when to offer provider referral.* Australasian Sexual Health Conference, Sydney (2010).

Reddel S, Bourne C, Stoové M, Hellard M, Kelly P. *Practice nurses in partner notification of sexually transmitted infections: how can they be utilised in the Australian context?* Australasian Sexual Health Conference, Sydney (2010).

Reddel S, Bourne C, Stoové M, Hellard M, Kelly P. *Practice nurses in partner notification of sexually transmitted infections and the internet: anonymous provider referral on sexual networking sites.* Australasian Sexual Health Conference, Sydney (2010).

Reddel S, Bourne C, Stoové M, Hellard M, Kelly P. *Patient referral in partner notification of sexually transmitted infections: improved outcomes with a scheduled follow-up phone call to index cases.* Australasian Sexual Health Conference, Sydney (2010).

Reeder, J. *Global Health; addressing the needs of the Asia-Pacific region.* NH&MRC workshop, Canberra (2010).

Sacks-Davis R, Gold J, **Higgs P, Hellard M.** *Treating drug users of hepatitis C: Myths & Realities, Evolving knowledge and practice.* 11th Social Research Conference on HIV, hepatitis C & related diseases, UNSW, Sydney (2010).

Smyth RP, Schlub TE, Grimm A, Venturi V, Chopra A, Mallal, S, Davenport MP, Mak J. *Mechanism of HIV diversity in its natural target cells.* ACH2 Meeting, Yarra Valley (2010).

Sonza, S. *Retention of Antiviral Activity following Vaginal Administration of a Dendrimer-based Microbicide Gel.* Australian Centre for HIV and Hepatitis Virology Research 6th Annual Workshop, Yarra Valley (2010).

Stoové M, Gold J, Dixon H, Hellard M, Lim M, Gouillou M, Spelman T, Johnson E, Wakefield M, Ferrari G, Aitken C. *Translating Research into Practice: Using SMS for Health Promotion to Young People.* Public Health Association of Australia 40th Annual Conference, Adelaide (2010).

Stoové M, Guy R, Spelman T, El-Hayek C, Goller J, Fairley CK, Leslie D, Tee BK, Roth N, Grulich A, Hellard M. *Infectious syphilis is associated with increased risk of HIV seroconversion in men who have sex with men in Victoria.* Australasian HIV/AIDS Conference, Sydney (2010).

Stoové M, Kirwan A, Winter R, Quinn B. *Intraprison injecting risk practices and post-release blood borne virus transmission: Results from a post-prison release cohort study of people who inject drugs.* Presented at the 8th Australasian Viral Hepatitis Conference, Melbourne (2010).

Stoové M, Pedrana A, Gold J, Howard S, Chang S, Benda P, Crang O, Keogh L, Hocking J, Hellard H. *The FaceSpace Project: New media, new frontiers: the power of online social networking.* Communications Conference, Sydney (2010).

Tachedjian, G. *Microbicides for the prevention of HIV and STIs.* Department of Microbiology Seminar Series, Latrobe University, Melbourne (2010).

Tachedjian, G. *Microbicides.* Department of Microbiology and Immunology, University of Melbourne (2010).

Tannock, GA. *Influenza: the virus and its significance as a human pathogen; the contribution of viral genetics to its control.* International Conference on the Genetics of Industrial Microorganisms, Melbourne (2010).

Telwatte, S. *The dendrimer SPL7013 demonstrates HIV-1 virucidal activity.* Australian Centre for HIV and Hepatitis Virology Research 6th Annual Workshop, Yarra Valley (2010).

van Gemert C, Gold J, Sacks-Davis R, Stoové M, Vally H, Dietze P, Hellard M. *Is the message getting through: Do young drinkers recall health promotion messages?* Public Health Association of Australia 40th Annual Conference, Adelaide (2010).

Vietheer, P. *Evaluation of a modified E2661 glycoprotein core domain as an HCV vaccine candidate.* Early Career Researchers Retreat Meeting, Australia (2010).

Westhorpe, C. *The HaCH Study: Markers of monocyte activation as correlates of cardiovascular disease in HIV patients.* Oral Presentation – Australian Centre for HIV and Hepatitis Virology Research (ACH2) Conference, Yarra Valley (2010).

Wilson K, **Pedrana A, Hellard M, Stoové M,** and Best S. *Development and Validation of Screening and Confirmatory Assays for Detecting Antibodies to HIV-1 in Saliva Samples.* Australasian Viral Hepatitis Conference, Melbourne (2010).

Winter R, Cohen J, Tupou-Tamani S, **Kinner S.** *Research with prisoners and ex-prisoners in Fiji: building the evidence base.* The Australian Professional Society on Alcohol and Other Drugs Conference, National Convention Centre, Canberra (2010).

Winter R, Dietze P, Hellard M, Robinson P, **Aitken C.** *The incidence and prevalence of hepatitis B virus infection and vaccination and their correlates among a cohort of people who inject drugs.* Victorian Substance Use Forum (VSURF), Burnet Institute, Melbourne.

Winter R, Dietze P, Hellard M, Robinson P, **Aitken C.** *The incidence and prevalence of hepatitis B virus infection and vaccination and their correlates among a cohort of people who inject drugs.* 8th Australasian Conference on Viral Hepatitis, Melbourne (2010).

Wright, E. *Current scientific research and clinical thinking about ageing and HIV.* 22nd Annual conference of the Australasian Society of Medicine. Invited Symposium Speaker. Sydney (2010).

Wright, E. *What's on your mind? – HIV and the brain.* 22nd Annual conference of the Australasian Society of Medicine. Invited Plenary Speaker. Sydney (2010).

Academic Positions and Appointments

Formal University Appointments/Affiliations

Anderson, D. Associate Professor, University of Melbourne, Department Microbiology and Immunology; Senior Lecturer, Department Microbiology, Monash University; Senior Lecturer, Department Immunology, Monash University.

Anderson, JL. Adjunct Senior Lecturer, Department of Microbiology, School of Biomedical Sciences, Faculty of Medicine, Nursing and Health Sciences, Monash University (2010).

Apostolopoulos, V. Professor, School of Molecular Sciences, Victoria; Associate Professor, Department of Pathology, University of Melbourne (2006-present); Adjunct Associate Professor, Department of Immunology, Monash University (2007-present).

Cherry, CL. Senior Lecturer, Department of Medicine, Faculty of Medicine, Nursing and Health Sciences, Monash University.

Churchill, MJ. Senior Lecturer, Department of Medicine, Monash University (from 2008); Member of the Australian National Centre for HIV Epidemiology and Clinical Research (NCHECR) Neurology Working Group (2007-present).

Crabb, BS. Adjunct Professor, Department of Medicine (Central Clinical School) and the Department of Immunology, Faculty of Medicine, Nursing and Health Sciences, Monash University; Adjunct Professor, Faculty of Medicine, The University of Melbourne; Adjunct Professor, School of Molecular Sciences, La Trobe University.

Crowe, SM. Professor of Medicine, Faculty of Medicine, Nursing and Health Sciences, Monash University. NHMRC Principal Research Fellow.

Drummer, H. Adjunct Associate Professor. Department of Microbiology. Monash University (2010); Honorary Senior Lecturer. Department of Microbiology and Immunology. University of Melbourne (2009-present).

Gorry, P. Associate Professor, Department of Microbiology and Immunology, University of Melbourne; Associate Professor, Department of Medicine, Monash University.

Hellard, M. Honorary Associate Professor, Department of Epidemiology and Preventive Medicine, Monash University.

Hogarth, M. Adjunct Professor, Department of Immunology, Monash University; Adjunct Professor, Department of Pathology, University of Melbourne.

Jaworowski, A. Adjunct Associate Professor, Department of Medicine, Monash University; Adjunct Associate Professor, Department of Immunology, Monash University; Burnet Institute Principal Research Fellow.

Achievements

Lewin, SR. Professor of Medicine, Monash University; Professor/Director Infectious Diseases Unit – The Alfred hospital; NHMRC Practitioner Fellow, SP2; Honorary Professor, Department of Microbiology and Immunology, University of Melbourne.

Loveland, B. Adjunct Associate Professor, Department of Immunology, Central Clinical School, Faculty of Medicine, Nursing and Health Sciences, Monash University; Principal Fellow, Department of Pathology, University of Melbourne, Faculty of Medicine, Dentistry and Health Sciences; Principal Fellow, Department of Surgery, University of Melbourne – Austin and Northern Hospitals.

Mak, J. Associate Professor, Department of Biochemistry and Molecular Biology, Department of Microbiology, Monash University; Australian Research Council Future Fellow.

Natoli, L. Adjunct Lecturer, Monash University, Department Epidemiology and Preventive Medicine.

O’Keefe, M. Adjunct Senior Lecturer, Department of Immunology, Monash University.

Pereira, CF. Adjunct Senior Lecturer, Monash Micro Imaging, Department of Medicine, Monash University.

Pietersz, G. Adjunct Professor, University of Melbourne; Adjunct Professor, Monash University.

Ramsland, PA. Adjunct Senior Lecturer, Department of Immunology, Faculty of Medicine, Nursing and Health Sciences, Monash University (2007-present); Honorary Principal Research Fellow (Associate Professor), Department of Surgery, Austin and Northern Health, Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne (2009-present).

Sonza, S. Adjunct Senior Lecturer, Department of Microbiology, School of Biomedical Sciences, Faculty of Medicine, Nursing and Health Sciences, Monash University (2009-present).

Tachedjian, G. NHMRC Senior Research Fellow (2009-present); Adjunct Associate Professor, Department of Microbiology, School of Biomedical Sciences, Faculty of Medicine, Nursing and Health Sciences, Monash University (2008-present); Adjunct Associate Professor, Department of Medicine, Faculty of Medicine, Nursing and Health Sciences, Monash University (2008-present).

Tannock, GA. Emeritus Professor of Virology, RMIT.

Toole, M. Professor, School of Public Health, Monash University.

Other Professional Appointments

Anderson, D. Member of NHMRC Grant Review Panel (Microbiology) (2010); Executive member of Australian Centre for HIV and Hepatitis Virology (2010).

Anderson, JL. Burnet Institute Fellow (2010); Burnet Institute Representative, Monash MicroImaging – AMREP Advisory Committee (2008-present); Burnet Institute Representative, Cellular Nano – Imaging Consortium (2010).

Apostolopoulos, V. Patron, Womens Wellness West (2007-present).

Asproloupos, D. Member, Medecins Sans Frontieres, Australia (2009-2010); Board member, Mandala Foundation Australia (formerly Antares Foundation) (2006-2010).

Brown, M. Nominated member, Australian Council for International Development (ACFID), Development Practice Committee (2006-present); Advisor, Monitoring and Evaluation Specialist, China-Australia Health and HIV/AIDS Facility (2009-present).

Cherry, CL. Member Australian National NeuroAIDS Brain and Tissue Bank Steering Committee (2002- present); Member, Victorian HIV Blood and Tissue Storage Bank Steering Committee (2007-present); Member, Alfred Health Research Review Committee (2008-present); Member, Alfred Health Ethics Committee (2010); Member, MS Advisory Council (2010); Fellow, Royal Australasian College of Physicians; Member, Australasian Society for Infectious Diseases; Member, Australasian Society for HIV Medicine; Member, Burnet Institute International Health Research Advisory Committee.

Crabb, BS. Section Head, Parasitology, Faculty of 1000 (2011-present); Director, AMREP Animal Services Pty Ltd (2010-present); Committee member, MR4 Science Advisory Committee (2010-present); PATH/Malaria Vaccine Initiative Vaccine Science Portfolio Advisory Council (VSPAC) (2008-present); Member, Gene Technology Access Centre (GTAC) Board of Management (2001-present).

Creati, M. Consultant Physician, Department of Adolescent Medicine, Royal Children’s Hospital, Melbourne, Australia (2005-present); Member, Special Interest Group International Health, Public Health Association, Australia (2005-present); Fellow, Royal Australian College of Physicians (Paediatrics) (2005-present).

Crowe, SM. Head, WHO Regional Reference Laboratory for HIV Resistance, Burnet Institute; Chair, Victorian HIV Blood and Tissue Storage Bank Steering Committee; Fellow, Royal Australasian College of Physicians; Fellow, Infectious Diseases Society of America; Member, Australasian Society for Infectious Diseases; Member, Australasian Society for HIV Medicine; Member, American Association for the Advancement of Science; Member, American Society of Microbiology; Member, International Society for Leukocyte Biology; Member, European Macrophage Society.

Degenhardt, L. Associate Faculty Member, Faculty of 1000 Medicine (2008-present); Associate Member, Australian Institute of Policy and Science (2009-present); Australian Representative, Intergovernmental Expert Group meeting on the Annual Reports Questionnaire, United Office on Drugs and Crime, (January 11-15, 2010); Board Member, AIDS Council of NSW (ACON) (2005-2010); Member of the Australian Delegation to the 53rd Commission on Narcotic Drugs, United Nations Office on Drugs and Crime, March 2010, Vienna, Australia (2010); Member of the Procurement and Contracting Panel, Specialist Scientific Services, Australian Federal Police, for advice on illicit drug use epidemiology (2009-present); Member, Australian National Association of Research Fellows (NARF) (2007-present); Member, Epidemiology and Public Health Section, World Psychiatric Association (2008-present); Registered psychologist, NSW Psychologists' Registration Board (2002-present); UN Office on Drugs and Crime (UNODC): Secretariat for the Reference Group to the United Nations on injecting drug use and HIV (2007-2010); WHO: Technical Advisory Group member for the eleventh revision of the International Classification of Diseases (ICD) Injury and External Causes of Injury (2009-2011); World Health Organization (WHO): co-chairing the Expert Group on Mental Disorders and Illicit Drug Use, responsible for advising on estimates of the Global Burden of Disease due to illicit drug use and dependence (2007-2011).

Dietze, P. Member, Drug Policy Roundtable (2010); Chair and Co-convenor Injecting Drug Harm Reduction Network (2003-2011).

Dorabjee, J Member, UN Regional Taskforce on Injecting Drug Use and HIV/AIDS in Asia and the Pacific (2005-present); International Representative: Sharan, New Delhi, India (2005-present); Executive member, Asian Consortium on Drug Use, HIV, AIDS and Poverty (ACDHAP) (2007-present); Executive member, Organizing Committee, Response Beyond Borders, The 2nd Asian Consultation on the Prevention of HIV related to Drug Use, Bangkok, Thailand (2009-present); Chairperson, Asian Network of People who Use Drugs (ANPUD) (2008-2010); Core member, UN Reference Group on HIV/AIDS Prevention and Care among injecting drug users in Developing and Transitional Countries (2010); Board member, Coalition of Asia Pacific Regional Networks on HIV/AIDS (7 Sisters) (2009-present); Member, Interagency Reference Group - UNAIDS Technical Support Facility for South Asia (2009-present).

Drummer, H. Member of the Burnet Institute PhD committee (2009-present); Burnet Institute Honours program coordinator (co-Associate Professor Paul Gorry) (2009-present); Elected Treasurer of Australian Centre for Hepatitis Virology (2008-present); NHMRC RD Wright Biomedical Research Fellow (2007-present).

Gorry, P. Chair, National Centre for HIV Epidemiology and Clinical Research Neurology Working Group.

Gray, N. Fellow, Australasian Faculty of Public Health Medicine (AFPHM) (2008-present); Consultant, WHO Expert Panel to develop recommendations from Systematic Review to Prevent Adolescent Pregnancy (2010).

Hellard, M. Hepatitis Expert Writing Group, National Strategies (2009-2012); InC3 – International Collaboration of Incidence Hepatitis in Injection Drug users, member of collaboration and on Collaboration Working Group; International 'Staying Safe' Collaboration; Justice Health Clinical Advisory Committee; Sidney Myer Health Scholarship Selection Committee; Australian Hepatitis Councils Health Reference Group; National HIV, hepatitis and STI Surveillance Committee; Public Health Prisoner Initiative Advisory Committee (Victoria); Victorian Government HIV Prevention Evaluation Advisory Group; Victorian Government Taskforces of the Sexual Health and Viral Hepatitis; NCHECR Viral Hepatitis Working Group (chair); WHO Working Group on Viral Hepatitis; Visiting Infectious Diseases Physician – Royal Melbourne Hospital (2002-2010).

Hogarth, M. Cancer Council Venture grants committee (2008-present).

Hughes, C. Member, Australian Council for International Development, Burma Working Group, Gender Equity Working Group (2006-present); Convenor, Australian Council for International Development, Burma Working Group, HIV Working Group (2006-present).

Jaworowski, A. Associate Member, Faculty of 1000.

Kinner, S. Member, Public Health Association of Australia and Prisoner Health Special Interest Group (2009-present); United Nations Office on Drugs and Crime (UNODC): review and enhancement of global drug data collection tools and processes (2009-2010); Technical Expert Member, Evaluation Advisory Group – evaluating drug policies and services for prisoners at the Alexander Maconochie Centre, ACT (2010); Invited attendee, United Nations Office on Drugs and Crime (UNODC) Expert Group Meeting on Drug Data Collection, Vienna, (July 2009); invited attendee, UNODC Open-ended Intergovernmental Expert Group on Data Collection, Vienna, (2010) Advisory Group member, Prison Mental Health Transition and Suicide Prevention Support Project, Queensland Prison Mental Health Service (2010); Member, national Prisoner Health Information Group (2005-present).

Mak, J. Vice President (Corporate Affairs), Australian Society for Microbiology; Executive, Victorian Infection and Immunity Network; Member of organizing committee for Lorne Infection and Immunity Meeting.

Morgan, C. Fellow, Royal Australasian College of Physicians, Child Public Health Special Interest Group (2005-present); Convenor and chair, World Health Organisation Best Practice Consultation on Hepatitis B Birthdose Vaccination (2010); Chair, China-Australia Health and HIV/AIDS Facility, Technical Reference Panel (2009-present).

Achievements

O'Keefe, M. Member of Victorian Day of Immunology Committee.

Otto B. HIV Advisor to Futures Group on Policy project (2009-present); Member, Purple Sky Network Regional Technical Board, Bangkok Thailand (2006-present); Member, AIDS Society of Asia and the Pacific (2007-present).

Parnell, B. Member, World Bank AIDS Strategy and Action Plan Technical Advisory Group (2010).

Power, R. Member, ANCD Asia Pacific Committee (2005-present); Secretariat, Pacific Drug and Alcohol Research Network (2006-present); Member, ANEX Research Advisory Board (2009-present); Member, Board of the Faculty of Medicine, Nursing and Health Sciences, Monash University (2010); Member, Indigenous Health Review and Development Committee, Monash University (2010).

Ramsland, PA. Member, Oversight Committee, Bio21 Collaborative Crystallisation Centre (2005-2010); Member, Research Higher Degrees Coordinators Committee, Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne (2005-present).

Reeder, J. Member of AusAID Malaria Reference Group; Member, Malaria Elimination Group, UCSF Global Health Sciences.

Snell, B. Advisor and Technical Consultant, AdWHO WPRO (Suva) program on pharmaceutical policies and access to good quality essential medicine for PICs (2005-present); Technical consultant, Ministry of Health Tuvalu (2010); Technical consultant, Cambodia National Medicines Policy, Department of Food and Drugs, Ministry of Health Cambodia (2010); Governing Council member, Health Action International Asia-Pacific (2009-present).

Soumokol, M. Member, Indonesia National AIDS Commission Research Working Group (2009-present); Member, Indonesia's CCM Global Fund Technical Working Group on AIDS (2008-present); Member, Indonesia's Ministry of Health PMTCT Task Force (2008-present).

Tachedjian, G. Member, NHMRC Postgraduate Scholarships review panel (2010); Burnet Principal Fellow, Burnet Institute (2008-present); Member of the Australian Society for Microbiology Research Committee (2009-present); Convenor, Premiers Award for Health and Medical Research (2005-present); Convenor, ASMR National Scientific Conference on 'Infection and Disease', held as part of the Australian Health and Medical Research Congress, Melbourne (2010); Member, scientific organizing committee, 6th Australian Centre for HIV and Hepatitis Virology Research National Scientific Workshop, Yarra Valley (2010).

Tannock, GA. Member, Australian Influenza Vaccine Committee of the Australian Therapeutic Goods Administration (1997-present); Member Risk Assessment Panel for the Importation of Eggs and Egg Products, Commonwealth Department of Agriculture, Forests and Fisheries (2004-present); Member of Committee of Assessors, National Association of Testing Authorities (2006-present); Consultant to the WHO on avian influenza, Jakarta Indonesia (2008-present).

Toole, M. Member, Global Fund Technical Review Panel (2005-present); Member, MSF Australia (2005-present); Vice President, Mediciens Sans Frontieres, Australia (2005-present); Member, Technical Review Panel, Global Fund to Fight HIV/AIDS, Malaria and Tuberculosis, Geneva, Switzerland (2006-present); Board member, Three Diseases Fund Board, Burma; Member, Independent Monitoring Board, Global Polio Eradication Initiative (2010).

Whitney, R. Co-Convenor, Australian Council for International Development, Africa Working Group (2007-present).

Wright, EJ. Fellow, Royal Australasian College of Physicians; Vice – President, Australasian Society for HIV Medicine; Co-Director Australian National NeuroAIDS Brain and Tissue Bank (ANNBTB) (2002-present); Member, Australasian Society for Infectious Diseases; Chair Asia – Pacific NeuroAIDS Consortium (2002-present); Chair, START Neurology Substudy (2008-present); Co – Chair, INSIGHT Neurology Interest Group (2008-present); Treatment Policy Advisor, National Association of People Living with HIV/AIDS (2008-present); International Clinical Advisory Committee ASHM (2010).

Journal Editorial Boards

Apostolopoulos, V. Recent Patents on Anti-Cancer Drug Discovery (2005-present); Current Medicinal Chemistry (2006-present); Expert Review of Vaccines (2006-present); Medicinal Chemistry (2004-present); Acta Biochimica et Biophysica Sinica (2006-present); Self/Nonself: immune recognition and signaling (2008-present); Associate Editor, Immunotherapy (2008-present); Guest Editor, Expert Review of Vaccines (2008-present); Guest Editor, Current Pharmaceutical Design (2008-present); Regional Editor, Recent Patents on Anti-Cancer Drug Discovery (2005-present).

Atiken, C. Editorial Board member, HIV Medicine Journal Club (2008-present).

Cherry, CL. ASHM Journal Club (2004-present); The Open AIDS Journal (2008-present); Journal of the International Association of Physicians in AIDS Care (2009-present).

Crowe, SM. Journal of Infectious Diseases (2002-present); Section Editor, Journal of Leukocyte Biology (2008-present); AIDS Research and Human Retroviruses (2009-present); Current HIV Research (2001-present); Sexual Health (2003-present); Future HIV Therapy (2006-present).

Dietze, P. Associate Editor, International Journal of Drug Policy.

Gorry, P. Current HIV Research (2005-present); The Open Microbiology Journal (2007-present); Retrovirology (2007-present); Infectious Disease: Research and Treatment (2008-present); Immunology and Immunogenetic Insights (2008-present).

Hogarth, M. Monoclonal Antibodies. (2008-present).

Kinner, S. Member of Editorial Board, Contemporary Drug Problems (2010).

Lewin, SR. Sexual Health (2004-present); AIDS Care and Sexual Health (2009-present); Clinical Immunology (2010-present); AIDS (2010-present).

Mak, J. Editorial Broad Member for Retrovirology (2004-present); Virology Journal (2004-present).

Power, R. Editorial Board Member, International Journal of Drug Policy; Editorial Board Member, Harm Reduction Journal.

Ramsland, PA. Associate Editor, Journal of Molecular Recognition (2007-present); Associate Editor, BMC Structural Biology (2009-present); Associate Editor, Frontiers in Immunology: Molecular Innate Immunity Specialty (2010); Editorial Board, Molecular Biotechnology (2006-present); Editorial Board, Molecular Immunology (2009-present).

Reeder, J. Scientific Editor, PNG Medical Journal (2004-present)

Snell, B. Editorial Board Member, Journal of Medicine Use in Developing Countries (2007-present).

Tachedjian, G. Current HIV Research (2005-present); International Journal of Virology (2005-present); The Open Microbiology Journal (2007-present); AIDS Research and Human Retroviruses (2009-present).

Tannock, GA. The Journal of Medical Virology (2001-present); Gene Vaccines and Therapy (2003-present), Journal of Biomedicine and Biotechnology (2008-present); The Open Veterinary Science Journal (2008-present).

Wright, EJ. Journal of Sexual Health (2001-present); International Journal Medical Sciences (2003-present); African Journal AIDS Research (2005-present); AIDS Care (2008-present); Journal of Neurovirology (2009-present); Clinical Infectious Diseases (2007-present); Journal of Infectious Diseases (2007-present).

Awards and Prizes

Degrees Awarded

PHD

Campbell, Justine: *Intergenerational transmission of alcohol expectancies.* University of Queensland. Supervisor: Dr Stuart Kinner.

Cowie, Ben. *The seroprevalence, molecular characterisation and mathematical modelling of hepatitis B virus infection in Australia.* Main supervisor – Associate Professor Bev Biggs and Associate Professor Margaret Hellard (co-supervisor).

Dong, Xuebin. *GBV-B infection of marmosets as a model for HCV infection.* Monash University, Department of Microbiology. Supervisor: Professor Eric Gowans.

Jenkinson, Rebecca. *Weekend on the town: patterns and correlates of psychostimulant use among young socialites.* Monash University, Monash Institute of Health Services Research. Supervisors: Associate Professor Paul Dietze and Associate Professor Damien Jolley. Scholarship NHRMC project grant.

McIlwraith, Fairlie. *The role and impact of faith-based organisations in providing services in the non-government AOD sector.* University of Queensland. Supervisor: Dr Stuart Kinner.

Smyth, Redmond P. *Mechanisms of HIV genetic diversity in its natural target cells.* Monash University, Department of Biochemistry. Northcote PhD Scholarship.

Wong, Sook San. *Studies of the ion channel activity of M protein of dengue virus.* University of Melbourne, Department of Microbiology and Immunology. Supervisor: Professor Eric Gowans, Dr Gholamreza Haqshenas, A/Professor Damian Purcell (University of Melbourne). Scholarship University of Melbourne.

Masters

Alhammad, Yousef. *Conformation and antigenicity of the HCV E2 receptor binding domain.* Monash University, Department of Microbiology. Supervisor: Associate Professor Heidi Drummer. Saudi Arabian International Scholarship.

Bowring, Anna. Masters of Public Health. Monash University, School of Epidemiology and Preventative Medicine, no supervisors, no scholarship.

Coppens, Cornelius. *To identify RNA (nucleic acids) determinant that drives viral diversity using fluorescent HIV.* Utrecht University, Immunology and Infectious Diseases. Supervisor: Associate Professor Johnson Mak, Dr Redmond Smyth.

Winter, Rebecca. Master of Public Health (coursework), Latrobe University, School of Public Health, Faculty of Health Sciences. Supervisors: Associate Professor Priscilla Robinson (Latrobe supervisor), Associate Professor Paul Dietze and Dr Campbell Aitken (Burnet supervisors).

Achievements

Honours

Arulmurugana, Arthi. *Anti-inflammatory signaling by the IgA receptor FcαRI.* University of Melbourne, Department of Pathology (H1). Supervisor: Dr Bruce Wines.

Booth, Ineka. *Pro-inflammatory cytokines and cellular mediators in a model of human autoimmune disease.* University of Melbourne, Department of Pathology (H1). Supervisors: Dr Bock Lim, Dr Maree Powell, Professor Mark Hogarth.

Borchich, Robert. *Mutational analysis of conformational signalling between gp120 and gp41 proteins to activate membrane fusion and virus entry.* Monash University, Department of Microbiology (H2A). Supervisor: Dr Andy Poubourios (Principal), Associate Professor Heidi Drummer.

Cashin, Kieran. *Elucidating the tropism of diverse CXCR4-using HIV-1 strains.* University of Melbourne, Department of Microbiology and Immunology (H1). Supervisors: Associate Professor Paul Gorry, Dr Melissa Churchill.

Dikmans, Eloise. *Patterns of alcohol and other drug use among emergency department presentations.* University of Melbourne. Supervisor: Dr Stuart Kinner.

Farsakoglu, Yagmur. *The mechanism of HIV disruption of NK cell signal transduction and function.* Latrobe University, Department of Microbiology (H1). Supervisor. Associate Professor Anthony Jaworowski, Dr Jason MacKenzie.

Gu, Jun. *Expression and characterisation of recombinant soluble heterodimers of the hepatitis C virus glycoproteins E1 and E2.* Monash University. Department of Microbiology (H1). Supervisors: Associate Professor Heidi Drummer (Principal), Dr Andy Poubourios.

Han, Isaac. *Understanding how cells protect themselves from the cytotoxic compounds produced during innate immune responses.* University of Melbourne, Department of Pathology (H2A). Supervisors: Professor Steve Gerondakis, Dr Ashish Banerjee.

Harvey, Katherine. *Cell signaling and its role in the invasion of red blood cells by malaria parasites.* University of Melbourne, Department of Microbiology and Immunology (H1). Supervisors: Dr Paul Gilson, Professor Brendan Crabb, Dr Kerstin Leykauf.

Hirst, Bevan. *Detection of single molecule of nucleic acid using a short oligo nucleotide FISH.* Deakin University, School of Life and Environmental Sciences (H1). Supervisors: Associate Professor Johnson Mak, Dr Kate Jones.

Horat, Elisha. *Control of T lymphoma development by the NF-κB pathway.* Monash University, Department of Immunology (H1). Supervisors: Dr Raffi Gugasyan, Professor Steve Gerondakis.

Humphreys, David. *It takes two to tango – improving adolescent males' access to sexual and reproductive health information and services in Vanuatu.* Monash University. Principal Supervisor: Natalie Gray, Centre for International Health; Associate Supervisor: Elissa Kennedy, Centre for International Health.

Ramanayake, Sam. *Strategies for reversing HIV latency in vitro.* Monash University, Department of Medicine. Supervisors: Professor Sharon Lewin, Dr Paul Cameron.

Degrees In Progress

PHD

Al-Hammad, Yousef. *Investigating the function of HCV variable regions in the infectivity of HCV tissue culture viruses.* Department of Microbiology, Monash University. Supervisors: Associate Professor Heidi Drummer, Dr Andy Poubourios.

Boyle, Michelle. *Understanding P. falciparum merozoite invasion mechanisms.* Department of Medical Biology, University of Melbourne. Supervisors: Dr James Beeson, Dr Paul Gilson, Dr Jake Baum (WEHI). APA and MDHS Top Up Award.

Bullen, Hayley. *Biochemical characterisation of putative membrane proteins of the Apicomplexan parasite Plasmodium falciparum.* Department of Medical Biology, University of Melbourne. Supervisors: Professor Brendan Crabb, Dr Paul Gilson, Professor Alan Cowman (WEHI), Dr Jake Baum (WEHI). Australian Postgraduate Award.

Chan, Jo-Anne. *Evaluating the importance of antibodies to Plasmodium falciparum variant surface antigens and their role as targets of protective immunity.* Department of Medical Biology, University of Melbourne. Supervisors Dr James Beeson, Dr Freya Fowkes, Professor Jake Baum (WEHI).

Chang, Christina. *Immunopathogenesis and diagnosis of cryptococcal-associated immune restoration disease in people with HIV.* Faculty of Medicine, Nursing and Health Sciences, Monash University. Supervisors: Professor Sharon Lewin, Dr Julian Elliott, Professor Martyn French (UWA). Scholarship: Previously Australian Postgraduate Award currently NHMRC Scholarship.

Charnaud, Sarah. *Export mechanisms in the malaria parasite Plasmodium falciparum.* Department of Medicine, Faculty of Medicine, Nursing and Health Sciences, Monash University. Supervisors: Professor Brendan Crabb, Dr Paul Gilson.

Cowley, Daniel. *Molecular studies of the astrocyte reservoir of HIV-1 in the central nervous system.* Department of Medicine, Monash University. Supervisors: Dr Melissa Churchill, Professor Steve Wesselingh.

Dean, Johanna Elisabeth. *Characterisation of the oxidation state of HCV envelope glycoproteins E1 and E2 during glycoprotein biosynthesis and virus entry.* Department of Microbiology, Monash University. Associate Professor Heidi Drummer, Dr Andy Poubourios.

Flynn, Jacqueline. *Stimulation and maintenance of T cell responses in acute HCV infection.* Department of Immunology, Monash University. Supervisors: Associate Professor Rose French, Associate Professor David Anderson, Professor Greg Dore (Monash).

Gold, Judy. *New Approaches to Developing & Evaluating Sexual Health Promotion for Young People.* Department of Epidemiology and Preventative Medicine, Monash University. Supervisors: Associate Professor Margaret Hellard, Dr Campbell Aitken, Dr Jane Hocking, Dr Louise Keogh (Monash)

Gorzin, Ali. *Study of the NS2 role in HCV Life cycle.* Department of Microbiology, Monash University. Supervisors: Professor Eric Gowans, Dr Reza Haqshenas.

Gouklani, Hamed. *Study of the role of the p7 protein of hepatitis C virus in viral life cycle.* Department of Microbiology, Monash University. Supervisor: Associate Professor Heidi Drummer.

Hyunsuh, Kim. *An analysis of mechanisms for the enhancement of yields of influenza B viruses in the preparation of human vaccines.* School of Applied Sciences, RMIT. Supervisors: Emeritus Professor Greg Tannock, Associate Professor David Anderson, Steve Rockman (CSL).

Khasawneh, Ashraf. *Studies on the activation mechanism of the HIV-1 membrane fusion glycoprotein, gp41.* Department of Microbiology, Monash University. Supervisors: Dr Andy Poubourios, Associate Professor Heidi Drummer.

Khoury, Gabriela. *Role of naïve t-cells in the pathogenesis of t-cell decline and long term persistence of HIV infection.* Faculty of Medicine, Nursing and Health Sciences, Monash University. Professor Sharon Lewin, Dr Paul Cameron. Scholarship: NHMRC Postgraduate Biomedical Scholarship.

Ko, Kerry. *Characterisation of pathogenic inflammatory cells in autoimmune disease.* Department of Pathology, University of Melbourne. Professor Mark Hogarth, Dr Maree Powell.

Kumar, Nitasha Asmita. *Dendritic cell induced latency in resting memory T cells.* Faculty of Medicine, Nursing and Health Sciences, Monash University. Professor Sharon Lewin, Dr Paul Cameron.

Lichtfuss, Gregor. *HIV immune function activation and the loss of antibody dependent cellular cytotoxicity (ADCC) function in natural killer cells.* Department of Medicine/Alfred Hospital, Monash University. Professor Suzanne Crowe, Professor Sharon Lewin. Scholarship: 2/3 MGRS + FPRS

Pedrana, Alisa. *Understanding HIV risk among men who have sex with men in Victoria.* Department of Epidemiology and Preventative Medicine, Monash University. Supervisors: Dr Mark Stoové, Associate Professor Margaret Hellard, Dr Rebecca Guy (University of New South Wales). Scholarship: NHMRC Dora Lush Postgraduate Research Scholarship and top-up Sidney Myer Health Scholarship

Quinn, Brendan. *Understanding the barriers to health service utilisation for methamphetamine users.* Department of Medicine, Faculty of Medicine, Nursing and Health Sciences, Monash University. Dr Paul Dietze, Dr Mark Stoové.

Roche, Michael. *HIV interaction with coreceptor; implications for tropism, drug resistance and pathogenesis.* Department of Medicine, Faculty of Medicine, Nursing and Health Sciences, Monash University. Supervisors: Dr Paul Gorry, Dr Melissa Churchill. Scholarship: Australian Postgraduate Award.

Sacks-Davis, Rachel. *Factors affecting the transmission and progression of hepatitis C in people who inject drugs.* Department of Epidemiology and Preventative Medicine, Monash University. Supervisors: Associate Professor Margaret Hellard, Dr Campbell Aitken, Dr Jason Grebely (University of New South Wales). Scholarship: NHMRC.

Salimiseyedabad, Hamid. *The functional characterisation of HIV-1 Envs derived from the CNS and their role in HIV-associated dementia.* Department of Microbiology, Monash University. Dr Melissa Churchill, Professor Steve Wesslingh (Monash). Scholarship: Iranian Ministry of Health and Medical Education.

Taechalertpaisarn, Tana. *Understanding the invasion of human red blood cells by Plasmodium falciparum.* Department of Medical Biology, University of Melbourne. Supervisors: Professor Brendan Crabb, Dr Paul Gilson, Professor Alan Cowman (WEHI), Dr Anthony Hodder (WEHI). Melbourne International Research Scholarship, Melbourne International Free Remission Scholarship.

Wightman, Fiona. *Using histone deacetylase inhibitors to reverse HIV-1 latency.* Faculty of Medicine, Nursing and Health Sciences, Monash University. Supervisors: Professor Sharon Lewin, Dr Anthony Dear (Monash).

Yang, Eunice. *Targeting oncoproteins by combined immunotherapy for breast cancer.* Department of Pathology, University of Melbourne. Supervisors: Associate Professor Bruce Loveland.

Honours

Maroba, Ope. *HIV drug resistance genotyping in patients with Low level viremia as a predictor for clinical outcome.* Department of Medicine, University of Melbourne. Professor Suzanne Crowe, Dr Anna Hearps.

Sebolao, Baotuti. *Novel markers of liver disease in HIV-HBV coinfection.* University of Melbourne, Department of Medicine. Supervisors: Professor Sharon Lewin, Dr Megan Crane.

Achievements

Other Awards and Prizes

Apostolopoulos, Vasso. ASI Gordon Ada Senior Travel Award (2010); Greek Australian of the Year (2010); Vice-Chancellors Citation for Outstanding Engagement Award Victoria University (2010).

Barry, Alyssa. AMREP Medical Research Week, Burnet Prize for Infectious Diseases Poster (2010).

Bisibisera, Leseter. Senior Medical Staff Prizes for Clinical Research. *Improving immunisation and newborn survival at the aid post level in Papua New Guinea.* (Bisibisera L, Winjong H, Bauze A, Morgan C) (2010).

Bullen, Hayley. Best oral presentation at Vic Infection and Immunity network, (VIN) student symposium. \$300 from Life Technologies (2010).

Cherry, Catherine. NHMRC Career Development Award (level 1) \$90500 pa, (2009-2012); Voted 'Best Explainer', Alfred Health Ethics Committee Annual Awards (2010).

Day, Stephanie. Multiple Sclerosis International Federation (MSIF) Du Pre Grant, London UK (2010); Ian Potter Foundation Travel Prize (2010).

Degenhardt, Louisa. 2010 Elsevier Young Researcher of the Year Award finalist, Elsevier Asia, Canberra, Australian Capital Territory; 2010 Peter Baume Public Health Impact Award, Faculty of Medicine, University of NSW (2010).

Gold, Judy. Winner, Monash University Faculty of Medicine, Three Minute Thesis Competition (2010).

Gray, Lachlan. NHMRC Postdoctoral Training Fellowship (2010-2013); Young Investigator Award 2009. 16th Conference on Retroviruses and Opportunistic Infections, Montreal, QC, Canada, \$1000; Gilead Early Career Investigator Gold Medal (HIV) award for most outstanding ECR presentation, 6th Annual Australian Centre for HIV and Hepatitis Virology Research (ACH2) Scientific Workshop, Yarra Valley, Victoria, \$3000; Investigator in Training Trainee Travel Grant. Award, 10th International Symposium on Neurovirology, Milan, Italy US\$1000 (2010).

Hearps, Anna. Ian Potter Foundation Travel Award, \$2578 (2010).

Jones, Kate. Best Poster prize in 2010 Victorian Infection and Immunity Network Post – Doctoral Research Day, \$200 (2010).

La, Jennifer. ASHM junior researcher support award, \$1000 (2010).

Lichtfuss, Gregor. GSK – Ausbiotech Student Excellence Award, Victorian State Winner (2010); Siemens Student Silver Medal, ACH², \$500; CROI Young Investigator to attend the 18th Conference on Retroviruses and Opportunistic Infections, Boston USA, US\$1445 (2010).

Nyguen, Phuong. Conference scholarship to attend the Australasian Sexual Health Conference and the Australasian HIV/AIDS Conference (2010).

Roche, Michael. Australian Postgraduate Award (APA); Student Oral Presentation Award, 5th and 6th Annual Australian Centre for HIV and Hepatitis Virology Conference, \$3000 (2010).

Smyth, Redmond. Best Poster prize in 2010 Lorne Genome Meeting, \$1000; Best Oral Presentation in ACH2 meeting, \$1000 (2010).

Stoové, Mark. Burnet Institute Travel Award \$300 (2010).

Telwatte, Sushama. ASHM Junior Researcher Support Award, \$1000 (2010).

Wright, Edwina. Research Award: Victorian AIDS Council (VAC) and Gay Men's Health Centre (2010).

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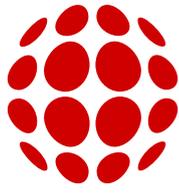
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