DIRECTOR’S REPORT

Welcome to the Autumn issue of IMPACT. At the time of writing this I have just returned from an important visit to Myanmar (Burma). Together with Board colleagues, Chairman Alastair Lucas AM and Board member, Natasha Stott Despoja AM, I had the privilege of meeting with Burnet’s program staff, visiting our women’s and children’s health projects and meeting with high-level government officials, including the Health Minister, Dr Pe Thet Khin and opposition leader, Aung San Suu Kyi. Discussions were very positive and centred on Burnet’s contribution to improving health systems, especially post Cyclone Nargis. The Institute has been working in Myanmar for more than 10 years and it is our largest international health program. Burnet is one of the few Australian non-government organisations to be in this country for this length of time. Myanmar as most of you would be aware is changing quickly, the political situation has eased somewhat, and the move towards a democracy is rapidly taking place. With this change, comes the capacity for organisations such as Burnet to provide support to address many of the health issues facing the country; especially the high rate of deaths among women during childbirth and that of their newborn babies. Your support of our Myanmar projects through the recent Christmas Appeal was most generous and I want to thank you for that, without it, we are unable to progress many of the priority projects Burnet has on its agenda.

This year will be one of significance for medical research in Australia. The final report from the government-commissioned McKeon Review into medical research has been released by the Federal Government. It provides a ten-year strategic platform for how medical research should be approached. Positive reform like this is crucial to our sector. These are challenging economic times and in my roles as Burnet Director and as President of the Association of Australian Medical Research Institutes, much of my focus has been on creating awareness across the political spectrum that medical research is essential for better health. There has emerged a strong consensus on this but it also needs to be understood that living longer, better and more productive lives makes strong economic sense. This won’t happen without a strong, vibrant and relevant medical research and public health community.

This issue of IMPACT discusses some of the key aspects of Burnet’s work in the areas of HIV and tuberculosis as well as taking a look at our work in China. I hope you enjoy reading this issue and look forward to sharing more about the Institute with you in the coming months.

Best wishes,

Professor Brendan Crabb,
Director and CEO
Dear supporter of the Institute,

In a few days, a very important letter will reach you. It will tell the story of Burnet’s revolutionary HIV diagnostic test, a world-first that could change the lives of millions of people living with HIV worldwide.

Nine years ago, Burnet took on the challenge of developing a simple HIV diagnostic test. The test was designed to quickly measure the number of a particular white cell in the blood known as CD4, which is an indicator of when patients should commence therapy. Current CD4 tests rely on flow-cytometry, a complex application widely available in the developed world, but of limited value for poor and vulnerable communities with restricted access to clinics and lab equipment. The inadequacy of the current technology means that millions of people lack appropriate access to therapy.

Many hurdles later we have almost reached the finish line. The first specimens of the test are currently being produced, with a view to undertake clinical trials over the coming months. This is where you can help. We need your support to bring the test from bench to bedside and ensure that those who need it the most can effectively use it.

The letter you will receive shortly will give you the chance to send a gift that will help us do just that. But if it is more convenient, you can donate now using the coupon inside this newsletter.

Many thanks for your support.

Professor Brendan Crabb,
Director and CEO, Burnet Institute

Thank you from the lab
To my great excitement, Burnet took possession of its first super-resolution microscope a few weeks ago. The microscope will enable scientists like me to capture images of human cells and infectious microbes in unprecedented detail for the first time in our scientific careers. We would not have been able to purchase this incredible machine without your support. Thank you so much for making this dream a reality!

Dr Candida da Fonsesca Pereira,
Head, Burnet’s Cell Imaging Facility

Thank you from Myanmar
Your support means that we will be able to train 540 health workers and midwives by the end of 2013, upgrade local health facilities, and buy basic equipment and medicines essential for the care of mothers in Myanmar.

I was incredibly touched to learn that more than $50,000 has been raised towards our mothers’ and children’s programs. Money goes a long way in countries like Myanmar, and your support will definitely change lives. I can assure you that your gift will be used with all our deliberate energy to improve the lot of those who need it most. Thank you!

Dr Karl Dorning,
Myanmar Country Representative
Do you have a small, unmarketable parcel of shares that you would like to put to work to improve the health of disadvantaged and vulnerable people in Australia and throughout the world? If so, ShareGift Australia can make the process very easy for you.

Your small share parcel can now be easily sold via an initiative which can benefit Burnet’s medical research and public health work, at no cost to you and in a tax effective way – through ShareGift Australia.

There are no brokerage fees and you can nominate the Burnet Institute as a beneficiary of ShareGift distributions. ShareGift Australia is an independent, non-profit organisation that arranges the sale of shares on market, free of brokerage/GST costs and donates 100 per cent of the cash proceeds to Australian charities. Donations of shares valued more than $2 are tax deductible.

Any number of shares can be sold in actively trading ASX listed companies through ShareGift. Even one share can make a difference.

For further information, see the ShareGift website sharegiftaustralia.org.au or download the donation form from the Burnet website burnet.edu.au/support_our_work

To discuss including a bequest of shares in your Will, please contact our Planned Giving Manager, Merrilyn Julian on (03) 8506 2338 or email mjulian@burnet.edu.au
**A GIFT OF LIFE FOR THOSE SUFFERING FROM TUBERCULOSIS**

*Every day 4,000 people lose their lives to tuberculosis (TB). It is curable, but access to research, diagnoses and treatment is grossly underfunded.*

While tuberculosis is more common in developing countries, there are still a number of new cases identified in Victoria each year. Victoria is also home to a number of researchers and practitioners working to prevent and treat tuberculosis around the world.

State Trustees administers the John Burge Trust Fund which will provide $50,000 to the Burnet Institute to support groundbreaking research that could help revolutionise tuberculosis diagnoses, treatment and prevention.

The Trust assists sufferers of tuberculosis and to fund research into the treatment and prevention of the disease.

The latest research being funded through the Trust will potentially save millions of people by providing considerably faster and more accurate detection of TB. This allows for faster and more appropriate treatment regimes and reduces the spread.

It is currently a lengthy and expensive process to confirm a tuberculosis diagnosis. Burnet’s research is looking to pioneer a new test that can quickly confirm if tuberculosis is present and also whether it is an active infection or whether the person is a potential carrier. If proven, this can have a massive impact on controlling the disease and improving outcomes for those diagnosed with tuberculosis.

The John Burge Trust Fund is also sponsoring a tuberculosis symposium to be hosted by the Institute this year. The symposium will bring leading clinicians, scientists, public health workers and organisations together to share the latest developments in prevention, detection, treatment and care for people diagnosed with or at risk of tuberculosis.

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**Q AND A: Like you, Ken and Jeanne care about creating a healthier world**

There are many reasons why people support the Burnet Institute, the following Q&A with Ken and Jeanne Deutscher, tells their story.

*Ken and Jeanne both have a background in science. They have been proud supporters of the Institute since 1990 and joined our monthly pledge program last year.*

**What prompted you to donate to Burnet?**

We were somewhat familiar with the work of Sir Frank Macfarlane Burnet, and interested in supporting the ongoing research effort required to combat infectious diseases.

**What does it mean for you personally to donate to Burnet?**

We understand the dedication, time and expense involved with any scientific endeavour, and so are pleased to be able to support in any small way that we can. Knowing that the results of this research are improving health and quality of life, both in Australia and internationally, is truly a wonderful feeling.

**Why did you choose to donate on a monthly basis?**

In the past, our donations had been varying and irregular. We are now in a situation where we can financially commit to a regular, manageable amount. In this way, we feel that we are at least providing some reliable support to the Institute.

**Which areas of our work are you most interested in?**

We recently attended an event at Burnet and heard of the innovative, inexpensive point-of-care test for HIV, and the positive impact it would have on lives and communities. The teamwork and dedication of all involved was inspirational.

**Do you have a message for other Burnet supporters?**

Every little bit helps! Whenever we think that our contribution is only small, we remind ourselves that if we can help with the cost of the tissues, the pipettes, or the culture dishes, that allows more of the Institute’s funds to go towards the big cost items.
RUSHING TOWARDS A CURE

MAKING OVER-ACTIVE CELLS SLOW DOWN TO FIGHT HIV

As a curious 17-year-old growing up in Jamaica, Burnet Institute immunologist Dr Clovis Palmer would collect newspaper clippings about the impact of HIV – it was just the beginning of the epidemic but he knew then he wanted to work in the field of HIV research.

It wasn’t as easy as deciding and then pursuing his dream. Dr Palmer comes from an agricultural society, and he says there were limitations in doing health science as well as a strong stigma attached to HIV research in Jamaica.

Dr Palmer ended up studying botany and biochemistry obtaining a double first class degree, which is considered a huge achievement at the University of the West Indies, Jamaica.

“A lot of my friends after their first degree went into medicine, but I always wanted to stay in science. I had a project to develop a genetically engineered plant but it didn’t get off the ground,” Dr Palmer said.

“After a few years in a Masters of Philosophy program that was going nowhere, I took myself to Cuba on what I thought was a post-graduate research scholarship – turns out I was actually enrolled in medicine.

“I stuck with it for a few months and got good marks but the first step inside a hospital made me realise that medicine was definitely not for me.”

With the aid of private funding and a scholarship for a PhD in plant genetics, Dr Palmer moved to Sydney where he was exposed for the first time to people who were infected with HIV.

“In 2004, I found out my closest friend was HIV positive and it really shocked me. I think that really re-ignited my interests in HIV. I began trying to find voluntary positions in HIV-based immunology labs,” he explained.

Dr Palmer started volunteering in a hepatitis C lab, after some hard yards being introduced to some of the more mundane aspects of scientific research, he ended up working full-time in the lab (paid) for four years.

The turning point for Dr Palmer’s HIV research dream was an International AIDS Society (IAS) Conference in 2007 where Burnet’s Co-Head of the Centre for
Virology, Professor Sharon Lewin gave a fantastic presentation.

“She spoke so passionately about HIV research – I was like wow – what an incredible inspiration.”

It was the push he needed – he was later awarded an IAS scholarship aimed at researchers with an interest in HIV research but no experience.

After receiving mentorship and further information about the field – he applied for the inaugural Creative and Novel Ideas in HIV research grant, supported by the IAS, National Institutes of Health, and Center for AIDS Research. This time he would be awarded funding to start his own project.

“I needed to think of ideas for a project – I learnt of Professor Suzanne Crowe at Burnet in Melbourne and Professor Mike McCune at the University of California, San Francisco. They believed in my ideas and became my mentors and I was one of 10 people internationally awarded the grant!”

Dr Palmer said.

WORLD-FIRST APPROACH TO FIGHTING HIV

Dr Palmer’s idea is a world-first piece of scientific research – he has proven HIV doesn’t just affect classical immune functions but how immune cells use energy.

“What we know for sure is that CD4 cells die during HIV infection – therefore people aren’t able to fight the virus on their own,” he explained.

“We’ve found that CD4 cells have very high metabolic activity in people with HIV – and even when they go on therapy, some don’t recover the normal amount of CD4 cells. These patients are predisposed to opportunistic infection, increased risk of cardiovascular disease, etc.”

“We need to find a way in which we can treat these people along with antiretroviral therapy so they can normalise activity of these cells and allow them to recover and not die off.”

This is exciting data, currently unpublished but Dr Palmer hypothesises that if we are able to normalise the metabolic activity it could re-energise the cells and allow them to recover normal immune function – so they could fight the virus itself, without the need for antiretroviral therapy.

“So we wouldn’t be treating the virus, we would be treating the cells to make them do what they are intended to do.”

The question now is how do we go about trying to normalise these cells – Dr Palmer had made a comparison of these metabolically active CD4 T-cells to cancer cells, could he use some drugs that have been developed to treat cancer?

“We have tested some cancer drugs in the lab and we were able to reduce significantly the metabolic activity – in some cases a concentration of one one hundredth, of that used in cancer treatment.”

Dr Palmer’s preliminary findings have gained international interest, and have been selected for oral presentations at Key Stone, IAS and local meetings. His research has fostered several collaborations in Australia, Europe, North and South America.

While it’s taken an enormous amount of hard work – in the past 10 years Dr Palmer has experienced a series of serendipitous events that have allowed him to pursue his dream of being an HIV researcher. He of course acknowledges the support from his mentors who navigate him through this new area of research.

DR PALMER BELIEVES A CONTRIBUTING FACTOR TO THE DEPLETION OF THE CELLS IS THAT THEY ARE OVER METABOLICALLY ACTIVE.

“One of the big things that stimulates my ongoing interest in HIV is that I’m closely associated with a community that is impacted by the virus – my main focus is not just to publish articles or to be a laboratory head but to do something that will have a direct impact and that can be used as quickly as possible. My research might be trying to slow down the cells’ metabolic rate, but I’m in a hurry!”
Imagine what it would be like to be diagnosed with a treatable and preventable infectious disease, but for whatever reason not able to get access to appropriate treatment. Burnet’s research in PNG aims to do something about it.

Many people of the Western Province in Papua New Guinea are in this situation – experiencing one of the worst tuberculosis (TB) epidemics in the world, with drug shortages, drug supply security and lack of access to health services contributing largely to the problem.

Head of Modelling and Biostatistics at the Burnet Institute, Associate Professor Emma McBryde, spent two weeks in PNG’s Western Province in September last year, assessing the incidence of TB and multi-drug resistant TB (MDRTB) in the region.

Associate Professor McBryde found that there were more than 1,000 cases of TB in the province of 200,000 people.

“That puts PNG at the same level as Cambodia which has the highest incidence level in Asia and also the same level as some sub-Saharan African countries. The number could be higher – this data is based only on the people who are on the TB register in Western Province,” Associate Professor McBryde said.

“Of those cases tested for drug resistance in Daru, about a third were confirmed as having multi-drug resistant TB.”

Daru Hospital treats the majority of drug-resistant TB patients in Western Province and according to Associate Professor McBryde are doing quite well but still not meeting World Health Organization targets.

The hospital experiences about 70 per cent completion success rates (patients cured), 10 per cent defaults (patients who the hospital has lost contact with) and 10 per cent failure rates – this is when patients continue to have active disease despite conventional therapy and have to go on a different treatment – this is a reflection of the drug resistance rates.

Not far away in the Middle Fly region and the southern part of North Fly of Western Province, the default rate can be up to 40 per cent and about 10 per cent of those treated for TB in Western Province die.

Associate Professor McBryde said HIV isn’t driving the high TB rates – unlike in sub-Saharan Africa for example, where HIV contributes to TB prevalence.

“Access to healthcare is a factor but it’s also the amount of crowding. You should educate people about what tuberculosis is, seeking care early and understanding cough etiquette but in the end it’s going to be things like the state of the housing and how people interact that drives tuberculosis,” she explained.

“For example – Western Province is sparsely populated, so there are two people per square kilometre, but they’re all in a very restricted space.”

“It’s not unusual to have more than 10 people in one household, which is essentially one room.”
Drug-resistant TB

Multi-drug resistant tuberculosis (MDRTB) is an emerging problem in the Asia and Pacific regions and particularly in PNG – it occurs when diagnosed patients are only partially treated.

Standard TB treatment consists of four medications. If patients are given these pills separately and they don’t adhere to the treatment regime of taking them all together or if they take the drugs then stop after a month but return for further treatment – this often leads to drug resistance.

“As far as is known, MDRTB is just as transmissible as standard TB so even if you aren’t creating drug resistance through the drug taking – it can propagate through transmission,” McBryde explained.

“I am worried if MDRTB increases in PNG, because those patients require longer treatment (two years) and it’s 200 times more expensive.

Currently, Daru Hospital has around 70 patients on their books with MDRTB.

“Not all of them are in hospital, some are ambulatory but they still have to come in everyday for an injection.”

McBryde is also concerned about the other districts in Western Province because MDRTB is only very occasionally being tested for – so the picture in the region could actually be a lot worse.

Where to now?

After assessing the incidence of TB and MDRTB in Western Province McBryde made a number of recommendations to get the region on track with its TB management program.

“Essentially what needs to be done is programmatic management of TB and WHO has done this in lots of countries with positive results,” she said.

One of the features of WHO’s TB program is ‘Directly Observed Therapy’ which entails patients having a respected member of the community (from the church or school for example) watching the patient take their drugs every day.

It also includes introducing combination pills (four medications in one) so patients can’t split the therapy thus reducing drug resistance, and also educating the community about TB, letting them know it’s curable with early recognition and care.

McBryde is working towards furthering her work in Western Province looking at different scenarios and the likely outcomes to TB in the region.

“For example – if HIV becomes an issue, what impact will that have? It’s forecasting work that can be done now and results can be used to develop strategies to further enhance the program,” Associate Professor McBryde said.

FIGHTING TB IN PNG

AusAID has provided a $31 million package to the PNG Government to improve TB services that include:

- TB specialist medical staff
- Training for community health workers and volunteer treatment supporters
- A sea ambulance that travels to patients in remote locations
- Medical equipment
- Drugs
- Laboratory diagnosis (in Australia) of drug-resistant TB
- Rehabilitation of Daru Hospital and Mabaduan Health Centre (which is less than five kilometres from Queensland’s Saibai Island)
- A $5 million contribution to support the Middle and South Fly Health Development Program (a $37 million initiative to improve primary health jointly funded by the Ok Tedi Fly River Development Program and AusAID).
Most Australians are familiar with China as a political and economic powerhouse and might question why organisations like the Burnet Institute would choose to devote resources to delivering assistance in this context.

**NOT EVERYONE IS BENEFITING FROM CHINA’S ECONOMIC BOOM AND ONGOING ASSISTANCE TO SOME AREAS IS VITAL.**

The reality is that even with China’s rapid growth and development there is continuing need for health improvements, particularly in the western provinces where systems addressing maternal and child health and infectious diseases still struggle to deliver basic services.

While China’s economic successes mean the country does have resources to dedicate to addressing its own health needs, the gap between rich and poor is widening.

Rural infant mortality for example is four to five times higher in the poorer compared to wealthier areas, and while life expectancy has increased dramatically for some of the larger cities, in poorer provinces the gains have been less consistent.

The Head of Burnet’s China Program, Lisa Renkin, has lived and worked in various parts of China over the past decade and says that investment and development has not transpired evenly across this vast country.

“There isn’t just a subtle difference in healthcare delivery between various provinces – anyone visiting Beijing or Shanghai will see impressive economic wealth and sophisticated services,” Ms Renkin said.

“But travel to the more rural or nomadic areas of China and the challenges are obvious – the population is spread out, it is ethnically diverse, marginalised and the health services there are much weaker.”

China is also facing the double burden of having transitioned rapidly but unevenly, thus experiencing health issues that are associated with both developed and developing nations. While still needing to address water and sanitation, infectious diseases and maternal and child health concerns, the country now also experiences serious chronic disease burden with ageing-related illnesses such as heart disease and diabetes.

This is due to an ageing population and shifts from traditional to more western lifestyle behaviours – increased consumption of fat in daily diets, high levels of tobacco use, hypertension due to high salt intake, and an increase in obesity.

The impact of these more complex, long-term health conditions upon the health system is significant.

“In 2009, the Chinese government introduced an ambitious national health reform package which is working to address some of the imbalances, focusing on equitable access, universal insurance coverage, improvement of primary health care facilities – aiming to secure health care coverage for all – but challenges remain,” Ms Renkin said.

Burnet’s work in China is directly in line with the national health reform package and the recently completed China-Australia Health & HIV Facility (CAHHF) is an excellent example of the partnership between Australia and China and the contribution Burnet can make to ongoing strengthening of the health system.
Over six years CAHHF developed and resourced a wide range of policy-relevant initiatives in areas as diverse as health insurance/financing, epidemic outbreak control and food safety.

Burnet has been active in China for more than 20 years, starting with a collaboration between Burnet’s now Deputy-Director, Associate Professor David Anderson and Peking University’s Professor Zhuang Hui, which led to the development of the world’s gold standard for diagnosing hepatitis E.

**BURNET’S FUTURE IN CHINA**

Burnet’s future focus in China will continue to find synergy between our strengths in complementary sectors – public health capacity building, infectious disease prevention and control, maternal and child health initiatives in the western provinces of China, and our ongoing biotechnology interests in the eastern parts of the country.

The Institute is working towards establishing its China program headquarters in Kunming city, Yunnan province (southwest China), which will enable us to work closely with the Health Bureau, Centers for Disease Control, and partners such as Kunming Medical University.

Having a Burnet office and team of staff in this location is also strategically important for cross-border initiatives, particularly for infectious disease prevention and control.

And with Burnet’s offices in both Laos and Myanmar well-established, the location of another team in Yunnan will enable us to deliver comprehensive approaches to local priorities such as malaria and HIV.

Burnet is also currently establishing an office in Nanjing (Jiangsu province), which will focus on our biomedical research program. We have recently been awarded our first competitive Chinese government grant and will commence research and development for a new diagnostic tool.

“The Institute is committed to maintaining a long-term presence in China by developing a sustainable business model that is quite different from our other country programs. We hope to conduct aspects of our world-class research and development in China, generating income for our public health activities,” Ms Renkin said.

“The calibre of our partners in China affords us the opportunity to contribute our expertise across the breadth of the Burnet Institute – technical program design and delivery, academic exchanges and joint programs of work, public health and laboratory-based research.

“We will be on the ground and aim to use our expertise for the best health outcomes, with a strong focus on the most vulnerable or disadvantaged populations. Our partners will be Chinese research and health policy institutions and government health agencies. We are aiming to be seen as a locally based resource working toward a common goal of better health for all.”

**CURRENT PROJECTS**

**Tibet Health Capacity Building Program**

This Australian government funded program aims to build technical skills for health workers and management capacity within the health system of the Tibet Autonomous Region.

**Building a collaborative biomedical research agenda**

With funding support via the Australia China Science & Research Fund, Burnet is working closely with colleagues to strengthen linkages between researchers and will be hosting an international forum in Hangzhou later this year as part of the Australia China Association for Biomedical Sciences conference.

**Tuberculosis (TB) diagnostics**

The Australia-China Council is funding a component of Burnet’s ongoing collaboration with the Chinese Institute for Pathogen Biology in Beijing, where our researchers are working together on developing a rapid assay for TB.

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**ADVANCES IN THE FIGHT AGAINST HIV**

Efforts to reduce the spread of HIV and to increase survival times and quality of life for those infected have been highly successful worldwide. An HIV infection is no longer the death sentence it was in the 1990s.

Over 1,100 new HIV cases were diagnosed in Australia in 2011, an increase of more than eight per cent over the 2010 figure. HIV notification rates in Australia are now at historic highs. One reason for this might be the effectiveness of antiretroviral therapy causing complacency in some high-risk groups, such as men who have sex with men (MSM).

**FIGHTING BACK**

One way to reduce HIV transmission is to remove obstacles to testing, which allows more people to learn their HIV status and respond appropriately. According to Dr Mark Stoové, Head of the HIV Research Program within Burnet’s Centre for Population Health, between 20 and 30 per cent of Australian HIV-positive gay men are unaware of their status.

Research shows that only about 20 per cent of high-risk Australian MSM test for HIV at recommended frequencies; increasing testing rates will reduce the number of people with undiagnosed HIV.

"By being diagnosed in a timely fashion, people can modify their sexual risk practices to prevent transmission of HIV to their partners and can receive treatment sooner," Dr Stoové said.

Timely commencement of treatment has additional prevention benefits. Recent research findings have made ‘treatment as prevention’ the new buzzwords in the HIV and AIDS field.

By suppressing HIV and reducing the amount of virus in the body, treatment greatly reduces the risk of onward transmission. The key to the future success of ‘treatment as prevention’ in Australia is the timely diagnosis of HIV and the reduction of barriers to frequent HIV testing.

**STANDARD TEST PROCEDURE**

Current clinic-based HIV testing involves sending a blood specimen to a laboratory. Patients make a second clinic appointment to receive their results several days later.

With high-risk men recommended to test two to four times per year, this can mean up to eight appointments each year. These requirements are a deterrent to testing for many people, and reduced testing means more opportunities for HIV to spread.

**RAPID HIV TESTING**

Rapid HIV testing kits were originally designed for use in less-developed countries where laboratory facilities are scarce. The test involves a finger-prick blood sample that is read on a test paper for the presence of antibodies to HIV and the HIV antigen itself.

"Rapid testing will mean that people only need to attend once and will have their test result in 20 minutes," Dr Stoové said.

If the rapid test is positive for HIV, the patient is asked to provide a full blood sample for standard testing to confirm the result.

Burnet to trial new rapid HIV testing service
The rapid test can be performed in convenient settings – non-clinical community services or in outreach settings such as social venues or in one of Burnet’s purpose-designed research vans – and can be performed by non-clinically trained staff who have undertaken accredited training in rapid HIV testing.

The test is in widespread use in the USA, UK and New Zealand, among other countries. A systematic review of research on the test, conducted by the Burnet’s Dr Alisa Pedrana and Dr Stoové, showed that community-based rapid HIV testing attracts a high proportion of high-risk men and men who have never been tested before.

**BURNET’S TRIAL OF RAPID HIV TESTING**

In mid-December 2012 the Therapeutic Goods Administration approved the first rapid HIV test for use in Australia.

The State Government recently allocated $1 million to the Burnet Institute and the Victorian AIDS Council to run Australia’s first community-based trial of rapid HIV testing, to begin in mid-2013.

Dr Stoové believes this is an important initiative that is likely to be the foundation for fundamental changes in HIV prevention in Australia.

“Rapid testing is set to become a key component of HIV prevention and care in Australia. It is important that we make the most of its potential by developing models of rapid testing that meet the needs of those most at risk of HIV,” Dr Stoové said.

“Ideally, this would involve rapid testing across a variety of settings – at community services, mobile testing, at clinics, in social venues and home-based testing. Our trial will provide valuable information about how to make this happen.”

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**MAGNET**

Part of the Burnet Institute’s rapid HIV test trial will be based on a program in San Francisco called Magnet. The Institute is planning for a shop-front location and a service that sits within a range of community services and programs that collectively support the gay community and HIV and STI prevention, like that of Magnet’s.

Magnet provides sexual health services as well as community events such as dance nights, art exhibits, town hall forums and other social events. It is described as a place where gay men can access resources and learn from each other to promote individual and community health.
POSITIVE MEETINGS IN MYANMAR

A Burnet delegation of Board members and executive staff have travelled to Myanmar meeting with government health officials and toured Burnet’s women’s and children’s field programs.

Director and CEO, Professor Brendan Crabb, Board Chair, Mr Alastair Lucas AM, Board member, Ms Natasha Stott Despoja AM, Burnet country representative Dr Karl Dorning and Burnet’s maternal and child health expert, Dr Kyu Kyu Than met with Myanmar’s Minister for Health Dr Pe Thet Khin.

“It was wonderful to hear that the Ministry’s approaches to improving health in Myanmar are so well aligned with our own ideas, especially around strengthening a broader system of health care, not just tackling single diseases,” Professor Crabb said.

The delegation also met with Nobel Peace Prize recipient and Myanmar Opposition Leader, Aung San Suu Kyi, discussing maternal and child health issues, HIV and AIDS, malaria and the lack of skilled medical professionals in the region.

“She has been a political inspiration for me, indeed she is my political heroine. Meeting her was an extraordinary honour and one I will remember for the rest of my life,” Ms Stott Despoja told AAP journalist, Mr Jeff Tumbull.

They also enjoyed the opportunity to meet many local women in Thanlyin Township where Burnet manages some key projects improving women’s and children’s health.

“I have never experienced anything quite like it – hundreds of people grateful because Burnet has been ‘capacity’ building. For them, this translates to keeping their babies alive,” Mr Lucas said.

Dr Michael Roche, a research officer from Burnet’s Centre for Virology has been awarded a prestigious Monash University Mollie Holman Medal for his PhD entitled ‘HIV-1 Envelope protein determinants of viral tropism and antiviral drug resistance’.

Up to 10 medals are awarded to doctoral candidates who have fulfilled their degree requirements and presented their faculty’s best thesis of the year.

Co-head of the Centre for Virology, Professor Suzanne Crowe AM said the Mollie Holman Doctoral Medals are among the highest academic honours bestowed by Monash University. Dr Roche said the award was quite a surprise, especially after having seen the calibre of former winners.

“It’s a great honour and I think it reflects really well on the quality of supervision I received from Professor Paul Gorry and the great research environment that we have here at Burnet,” Dr Roche said.
Visiting Scientists

Burnet has opened its laboratories to two scientists, from China and Timor-Leste, to further their training in their chosen fields of research.

Ms Hongmei Liu from China’s Institute for Pathogen Biology (IPB) spent four weeks training with Kye Mohd Hanafiah from Burnet’s Diagnostics Development Laboratory, learning techniques of a novel diagnostic assay. The visit was part of an ongoing collaboration with China’s IPB in developing diagnostics for active pulmonary tuberculosis (TB).

“In the long-term, Burnet’s plan towards the establishment of a TB vaccine program will be enhanced by sharing knowledge with IPB – we are confident that Hongmei’s visit to our labs will be the first of many steps on this journey,” Associate Professor David Anderson, Head of the Diagnostics Development Laboratory said.

A training microbiologist from the National Health Laboratory in Dili, Timor-Leste, Mr Ismael Baretto spent six weeks training at Burnet through a new collaboration that will improve malaria treatment for the 120,000 people that contract the disease every year in the country.

Two of Burnet’s malaria researchers Dr Jack Richards and Mr Andrew Guy have assisted Mr Baretto to learn a new assay that identifies an important genetic enzyme deficiency that occurs in red blood cells.

“If the deficiency of this enzyme (glucose-6-phosphate dehydrogenase) is not identified and these patients receive the recommended treatment for Plasmodium vivax malaria with a drug called primaquine, their red blood cells may be destroyed, leading to severe anaemia and even death,” Dr Richards explained.

“This assay can confirm what they see in the microscope with much greater precision, it will form an important part of the quality control program for the malaria diagnostics for the whole country.”

~Mr Ismael Baretto with Burnet’s Mr Andrew Guy and Dr Jack Richards.

~Ms Hongmei Liu and Ms Kye Mohd Hanafiah in the Diagnostics Development Laboratory.
Your bequest will help transform lives.

At Burnet, we’re passionate in our commitment to a healthier world.

Whether it’s researching and developing new approaches to the prevention and treatment of infectious diseases such as HIV, hepatitis, malaria or tuberculosis, understanding the factors underlying cancer, or building capacity and strengthening health services in the developing world, everything we do is focused on making a sustainable difference to people’s health in Australia and overseas.

For further information about including Burnet in your Will, please call our Planned Giving Manager for a confidential discussion.

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