

scope

Research gives hope

Hope is a powerful, emotive word that holds different meaning to different people. For the scientists at the Malaghan Institute, it is the belief that through quality basic research we can cure diseases such as cancer, asthma, arthritis and tuberculosis.

By supporting basic research you are investing in hope – hope that there are other options out there for those afflicted by disease, hope that these treatments will not have adverse effects on the lives of those receiving them and, most importantly, the hope that our scientists will find a cure.

In this issue of Scope we highlight the Malaghan Institute's vaccine programme as an example of basic research that is successfully making its way into the clinic and get cancer patient Kathryn Williams's perspective on how this work is providing hope to cancer sufferers. We also introduce the Institute's new state-of-the-art Keith and Faith Taylor Cancer Research Laboratories and speak with a member of the Auckland Friends about the personal reasons behind her decision to volunteer for the Malaghan Institute.

"I have witnessed how scientific research by the best minds can turn hope into tangible realities. I believe the cancer vaccine research projects at the Malaghan Institute are the best opportunity we have for doing something of benefit for Kathryn and other people in her situation. I am utterly determined to see this happen."

Prof Graham Le Gros, Director.



Prof Graham Le Gros pictured with Kathryn Williams – who is currently receiving the Malaghan Institute's melanoma vaccine. Read about Kathryn's story in this issue of Scope.

The science of vaccination

With the success of the worldwide polio vaccination programmes, which have virtually eradicated new cases of the disease, images of entire hospital wards filled with rows of patients in iron lungs are thankfully a thing of the past.

In fact vaccination is generally considered one of the most effective means of preventing the spread of infectious disease and is credited with increasing our life span by 30 years since the turn of the last century.

The earliest report of vaccination dates back to the late 17th century when English physician Edward Jenner used pus scraped from cowpox blisters on the hands of a milkmaid to protect a small boy against infection with smallpox. Although this is a rather crude example of a preventative vaccine, the theory behind it is still relevant today. By exposing your body to a weakened form of a particular infectious bacteria or virus, a vaccine fools it into thinking it is under attack. This gives your immune system the opportunity to learn how to defend itself, should it ever be invaded by the actual pathogen. A current example of such a vaccine is Gardasil, pioneered by Prof Ian Frazer from

the University of Queensland, Australia, which is currently being given to teenage girls to protect against infection with human papillomavirus, the leading cause of cervical cancer.

The Malaghan Institute has a groundbreaking vaccine programme that is committed to the development of more effective vaccines against parasites such as human hookworm and the bacterium that causes tuberculosis. However, our scientists also believe that the immune system can be taught to fight any disease, not just those caused by infectious organisms.

For over a decade the Malaghan Institute has been developing a therapeutic dendritic cell cancer vaccine, which is currently being evaluated in a Phase I Clinical Trial for glioblastoma multiforme. This research is headed by Dr Ian Hermans, a recent recipient of a prestigious HRC programme grant to conduct a clinical trial of a vaccine against melanoma. Our scientists are also working on a therapeutic vaccine that has the potential to alleviate the symptoms of asthma. These vaccines work differently to the preventative vaccines described above in that they are given to an individual after they have already shown signs of disease.



Founder of the Gardasil vaccine, Prof Ian Frazer, with Head of the Malaghan Institute's Cancer Immunotherapy Group, Prof Franca Ronchese, after Prof Frazer's public lecture to celebrate World Day of Immunology 2010.



Dr Ian Hermans with Vaccine Research PhD student Dianne Sika-Paotonu.

The Keith & Faith Taylor Cancer Research Laboratories

On 5 May 2010 the Malaghan Institute officially opened the Keith and Faith Taylor Cancer Research Laboratories. This facility, which includes two separate GMP (Good Manufacturing Practice) laboratories, will be used to support our vaccine research efforts.

A GMP laboratory is more sterile than an operating theatre and has many unique features that set it apart from other laboratories, such as light switches that are flush with the wall so that they don't gather dust. By increasing the number of GMP certified laboratories at the Malaghan Institute, we have



Hon Tony Ryall and Faith Taylor in the new cancer research facility.

significantly enhanced our capacity to undertake clinical trials of vaccine therapies against cancer, asthma, Tb and other diseases.

The laboratories were opened by the Hon Tony Ryall, Minister for Health, and demonstrate the Institute's sustained commitment to translating the work done at the lab bench into new and improved ways of treating disease. The ceremony was attended by the Taylor family, long-term supporters of the Malaghan Institute, whose generosity has made this new facility possible. Also in attendance were the Chancellor and Vice Chancellor of Victoria University, Wellington Mayor Kerry Prendergast, vaccine recipient Kathryn Williams and clinicians and senior representatives from Capital and Coast District Health Board.

Taking basic research results and converting them into whole new approaches to treating disease is no easy undertaking. It takes time, patience, an extensive network of clinical and research partners, and the support of generous individuals. The Malaghan Institute is now uniquely placed to be able to carry out this kind of work and we hope – we believe – that by doing so we will genuinely be able to offer more effective treatments against some of the most devastating diseases affecting New Zealanders.

United in a common cause

It took 2000 scientists to perfect the Gardasil vaccine, investment of over \$US 1 billion to produce it and the involvement of tens of thousands of women in the numerous clinical trials undertaken to test its efficacy and safety.

A daunting prospect to many but not the dedicated scientists at the Malaghan Institute who believe passionately that their research will one day benefit the lives of fellow New Zealanders affected by

disease. The reason for this is simple - our scientists do not work alone.

To successfully translate our basic research into a therapy that is used to treat patients, such as the cancer vaccine, our scientists utilise the many collaborative networks established with top researchers, clinicians and health care workers both within New Zealand and from across the world - as the proverb says "a problem shared is a problem halved".

A patient's perspective

In 2008 Kathryn Williams was diagnosed with incurable stage IV metastatic melanoma and given nine to 12 months to live. What started as a small black spot on her shoulder then turned into an aggressive cancer that spread to her collar bone, kidney and ovaries.

Two years on Kathryn is still living life to the full and attributes some of this to the "parcel of hope" provided to her through access to the Malaghan Institute's Compassionate Use Cancer Vaccine Programme. Kathryn says that being treated with the cancer vaccine has not interfered with her life and she has not suffered any ill side effects.



Faith Taylor and Kathryn Williams speaking with GMP Production Technician Evelyn Bauer in the new cancer research laboratories.

"When I received my prognosis, the most poignant moment was the realisation there was no curative treatment option available for my disease; a diagnosis with no cure, left me in an extremely vulnerable position.

I remember well the flicker of hope ignited the day my medical oncologist advised me that the Malaghan Institute of Medical Research were offering me access to a vaccine.

I understood it was not a cure to my circumstances, but this Malaghan crowd won my heart.

The only thing I needed to know was that a team of medical researchers and scientists were aware of my situation; and in conjunction with my medical team, had put their hands up to help.

I have an immense sense of gratitude to the team at Malaghan, for the amazing work they do and the invaluable contribution they have made and continue to make to my wellness.

I believe in the vaccine and I am privileged to be a recipient of the programme".

On behalf of all the staff at the Malaghan Institute, we would like to thank Kathryn for her courage in speaking about her disease and her experience with the cancer vaccine, and also for reminding us of the importance of living life for today.

By world standards the Malaghan Institute is comparatively small, but our expertise in immunotherapy is internationally recognised and by working with organisations such as the National Institutes of Health in the US and the Ludwig Institute in Australia, we can ensure our groundbreaking research has a realistic chance of leading to improved health outcomes for patients.



Locations of national and international Malaghan Institute collaborators.

A volunteer profile – Trudi Gardner



Trudi Gardner.

Annabel Lush, representing the Malaghan Institute from our Northern Office, recently spoke with Trudi Gardner about why she chose to volunteer as a member of the Auckland Friends group.

When did you first start fundraising?

I guess like many New Zealanders, I began fundraising by collecting milk bottle caps and coins for charity while at primary school! As a teenager, I sold Girl Guide biscuits and helped with charities my mother was involved in, such as the Red Cross.

What have you done since you have been a parent yourself?

I have done a wide range of volunteer work and fundraising - for Plunket, Auckland Kindergarten Association, Brownies, Cubs, Primary School Galas, our children's sports teams, and Auckland City Art Gallery where I was a docent for seven years.

It has been most enjoyable because, by volunteering, I have been really involved in these organisations and have been able to really get to know people in each place.

When did you first hear about the Malaghan Institute?

I heard of the research facility when it first started in Wellington in the 70's. It appealed to me because it is a NZ organisation. As New Zealanders, we have a fresh, inventive, yet highly professional approach, which may just make all the difference in tackling some of the serious illnesses we have. Coming from an arts background, I admire the technology and scientific expertise in medical research.

Why did you decide to volunteer?

Originally, I volunteered because I just thought it was a worthwhile institute. I had some free time and I wanted to be contributing somehow in the community.

Was there a personal connection?

On reflection, I realise there are several personal reasons: my best friend died of cancer, my mother-in-law had multiple sclerosis, my nephew had severe childhood asthma. Last year, I went to a school class reunion and found that four of my class mates had died of cancer. These are all illnesses the Malaghan Institute is researching so I couldn't have chosen a better place to support.

If you would like to volunteer for the Malaghan Institute from anywhere in NZ, please contact Vicky Hale on 04 499 6914 x821.

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What's been happening...

In the market for a cure

In memory of Sally Paterson, who tragically passed away from brain cancer in August 2009, the Paterson family and team at Just Paterson Real Estate set an ambitious target of raising \$50,000 to support the Malaghan Institute's cancer vaccine research. Through their dedication to our cause, Just Paterson succeeded in raising an amazing \$60,000 which was presented at a function held in May. We would like to offer our sincere gratitude to the Paterson family and the team at Just Paterson for supporting our research and helping our scientists work towards a cure for cancer.

Motorbikes, fashion and fundraising

The Auckland Friends of the Malaghan Institute recently organised a very special evening of fashion and classic bikes to raise awareness and funds for the Institute. Over 200 guests attended the event entitled 'We Have Our Engines Running Hot' enjoying an exclusive catwalk show of Petrena Miller designs and a line up of classic motorbikes, in the unique "New York loft" environs of Shed 5 in Central Auckland. The event was a great success, thanks to the wonderful support of the models, backstage team, Cameron Brewer as MC and everyone who gave their time so generously. AMI Insurance, Spy Valley Wines and Deus ex Machina are also to be thanked for their tremendous support.



Petrena Miller designs being modelled by Samantha Nicholas on a Harley provided by AMPS – Auckland Motorcycles and Power Sports.

Grants (March 10 – June 10)

Thank you very much to the following organisations for their support:

The Southern Trust
Cuesports Foundation

Love Boat Ball 2010

An Auckland volunteer group held their 8th Love Boat Ball on Auckland's waterfront in early May with funds raised donated to the Malaghan Institute. Originally started in Auckland and then moved to London when many in the group were on their "OEs", the Love Boat Ball has become a tradition and a great excuse to get back together for a good cause. Over \$9000 was raised to support our scientist's critical research. Our thanks to the crew for co-ordinating another great event for landlubbers.



Left to right: Blair Lobb, Dan Hewitt, Anna McInness and Matt Malaghan

Trekking towards a cure

Every year The Great New Zealand Trek Charitable Trust Inc run a trek for walkers, mountain bikers, and horse riders to raise money for Multiple Sclerosis. Since the inception of this annual trek in 1996 it has raised over \$300,000 that has been donated to MS organisations. The 2010 Trek from Oparau to Taumararua spanned eight days and raised \$29,000, generously donated to the Malaghan Institute towards MS research. Thank you very much to all those involved.

Up-coming events

The Friends of the Malaghan Institute will be holding their annual charity golf tournaments on the following days:

Hawke's Bay – Hastings Golf Club,
Friday 29th October

Auckland – The Grange Golf Club,
Friday 12th November

Wellington – Manor Park Golf Club,
Friday 12th November

For more details, please contact Vicky Hale on
04 499 6914 x821 or vhale@malaghan.org.nz