



Research is our journey. Cure is our destination.

Behind every name there is a story. For the Malaghan Institute that story begins in 1960's Wellington, with Tip Top co-founder Len Malaghan.

At the peak of his pioneering business career, Len Malaghan was diagnosed with Hodgkin's disease, a cancer originating from white blood cells called lymphocytes. Receiving a diagnosis of cancer is devastating for anyone. Particularly when faced with the realisation that there are only limited treatment options available.

Rather than dwelling on his own situation however, Len and wife Ann decided to make a difference to the lives of future generations of individuals facing a similar battle with cancer, by supporting cutting-edge medical research. This support formed the foundations of what would become the Malaghan Institute of Medical Research.

In recent years there has been a considerable focusing of the Malaghan Institute's medical research efforts into the

development of therapies that harness the immune system for the treatment of cancer and other diseases such as asthma, allergy, arthritis and multiple sclerosis.

We are fortunate to have some of New Zealand's best scientists and clinicians working for us. A team of leading business minds, medical practitioners and scientists provide governance. Our dedicated Friends committees work hard to raise awareness and support for our research. Most importantly, we receive immense support and loyalty from the community, without which we could not operate.

In this issue of Scope we take a look behind the scenes, to tell the stories of some of the different people that make up our greater Malaghan Institute family, and their motivations for joining us on this journey of discovery, in Len's name.

OUR PEOPLE

Meet a rising star –
Ryan Kyle

OUR COMMUNITY

The importance of
family & community

RUN FOR RESEARCH

Grab a friend and
join us!

From the Director



During the past year we have witnessed the coming of age of immune therapy. With the recently reported successes of the immune activating agent anti-PD-1 in cancer clinical trials, the huge potential of immune therapy is starting to be realised.

We have been focused on building an expertise in immunology here at the Malaghan Institute for a number of years. It is our point of difference from the majority of other medical research institutes. By working with an extensive network of national and international research partners, clinicians, industries and community representatives, we can bring this expertise to bear on issues of greatest need here in New Zealand.

Fundamentally, it is our relevance to the community that supports us that matters most. Cancer remains a national priority and we have a mature cancer vaccine programme founded on decades of experience. Alongside this we have a rapidly developing programme in an area of emerging importance – gut health, which impacts on diseases ranging from food allergy through to diabetes, obesity, and cardiovascular disease.

We are committed to using all our resources to fulfil the Malaghan vision and transform basic health discoveries into improved outcomes for all New Zealanders.

Prof Graham Le Gros

Ordinary guy, extraordinary scientist

Hawkes Bay born and bred, Ryan Kyle is a fairly typical Kiwi bloke. That is until you get him in the lab.

The Malaghan Institute is home to many talented scientists. One such individual is PhD student Ryan Kyle. Under the supervision of Professor Graham Le Gros, he is undertaking world-class research into the allergic immune response, supported by a Rex and Betty Coker Scholarship.

"Coming into work each day and doing an experiment that no person in the world has ever done before, or maybe even thought of, is exciting in itself," says Ryan. "Then seeing the data and outcomes of that hard work being published – it is incredibly motivating."

Ryan is referring to his collaborative research with scientists from Sydney's Centenary Institute, published earlier this year in the prestigious scientific journal *Nature Immunology*. This is a lifetime goal of any scientist, and an astounding achievement for a young PhD student in the early stages of his career.



Ryan Kyle

"Working alongside Dr Ben Roediger and Professor Wolfgang Weninger from the Centenary Institute, and learning their techniques for studying cells in the skin, was an amazing experience. I am very grateful to the Malaghan Institute and Prof Le Gros for providing me with these opportunities."

In the long term, Ryan hopes his research will contribute to work that could prevent the development of allergic diseases in children. If things keep going the way they are, we are in no doubt that Ryan will achieve whatever he puts his mind to.

Our history of innovation and discovery

66

Wellington Cancer Medical Research Institute Trust established.

78 - 79



Prof William Stehbens appointed as Director of the Wellington Cancer and Medical Research Institute (WCMRI). The Institute officially opened on 26 July 1979 in rented premises at the Wellington School of Medicine.

80 - 95

Causes of atherosclerosis
- significant new knowledge generated in understanding the basis of atherosclerotic plaque formation.
Breakthrough in understanding blood cell formation
- discovered that erythropoietin promotes platelet production.

86



Name of the Institute changed to the Malaghan Institute of Medical Research in recognition of the generous support by the late Mr Len Malaghan and Mrs Ann Malaghan (pictured).

1966 →

The importance of family and community

For a Wellington family, and top real estate team, losing a loved one brought to the fore the difference that medical research could make to the lives of others in the community. Having lost company co-founder and much-loved wife, mother and colleague Sally Paterson in 2009 to brain cancer, the team at Just Paterson Real Estate set out to make a difference – and what a difference they have made.

Four years on, the Just Paterson team, their clients and friends have together contributed more than \$200,000 towards advancing our cancer research. Not only have they raised this incredible amount so far, they continue to work hard on raising awareness in the community of the importance of joining together in the fight against diseases like cancer.

"We're proud to play our part in connecting more people with the ground-breaking research happening at the Malaghan Institute," says Just Paterson Director and husband of Sally,

Ian Paterson. "We are in it for the long haul, like most of our relationships our partnership with the Malaghan Institute is a long term one."

With October being 'Malaghan Month' at Just Paterson, and the Rotary Club of Port Nicholson, a club to which Ian belongs, showing their support recently through their annual charity

auction, we owe a lot to the dedication of these wonderful people who have turned a heart breaking loss into an opportunity to help others in the future.

Just Paterson's newest team member Charles Morely-Hall says "it's fantastic to be on board with Just Paterson and equally as exciting to be supporting such a worthwhile cause."



Clockwise from top left: Just Paterson Five Painters charity art auction, Ian and Marcia Paterson at a function honouring Sally and the support of Just Paterson, Sally Paterson – Just Paterson company co-founder and much-loved wife, mother and colleague, the Just Paterson team learning more about our research on a tour



98

Phase I non-Hodgkin's lymphoma clinical trial - developed novel method for making a vaccine against tumours that uses the body's own dendritic cells and tumour tissue. Outcome of trial supported use of immunotherapy to treat cancers such as non-Hodgkin's lymphoma.

94



New initiative in the field of immunology and asthma developed with appointment of Prof. Graham Le Gros as Director.

00

Using TB vaccine to block development of allergic asthma - discovered that specific kinds of bacterial lung infections alleviated the symptoms of allergic asthma in experimental models.

04

Phase III melanoma clinical trial - undertaken in collaboration with Wellington Hospital Blood & Cancer Centre and Queensland Institute of Medical Research.



Opening of new Institute - The Malaghan Institute relocated to a purpose-built facility on the Kelburn campus of Victoria University of Wellington.

06

First in New Zealand to receive Medsafe approval of GMP laboratories for the manufacture of cellular vaccines against cancer.

05

Novel therapy for MS - discovered that a toxin from bacteria could be used to treat the symptoms of multiple sclerosis in a laboratory model of the disease.

07



Identification of arthritis drug candidates from NZ environment - used novel drug discovery assay to screen NZ's marine and terrestrial plants and organisms for anti-inflammatory activity.

08 - 11



Chronic Lymphocytic Leukaemia (CLL) clinical study - identified CLL as a potential candidate for vaccine-based immunotherapy.

From the Chairman

This issue of Scope shares some of the inspirational stories of the people and organisations who play a role in the success of the Malaghan Institute. These stories compelled me to share a few personal memories of my involvement in the Institute's journey.



Graham Malaghan

My first memory of what could be called the start was attending an afternoon tea at Wellington Hospital in 1967. The event, hosted by Sir Charles Burns, marked the gift from my father and mother, Len and Ann Malaghan of some 200,000 shares in their company General Foods Corp Ltd. The gift was to establish the Haematology Fund of the Wellington Medical Research Foundation.

Sadly, my father died from cancer later that year, but our family remained closely involved in supporting medical research. Our mother, Ann, was keen to support cancer research and in 1985 she provided funds for a considerable array of equipment for the Wellington Cancer and Medical Research Institute. The Institute

wanted to reach all New Zealanders by dropping the regional description and asked Ann if she would consent to a name change. Ann agreed, much to the surprise of her family.

By 1989 the Malaghan Institute of Medical Research found itself so short of funds that the partners decided they could no longer maintain its operations. John Beattie, then a senior Brierley Corporation Manager, encouraged me to become involved. The board resigned, a new Trust was agreed to by the High Court and the Institute became fully autonomous and set a new course. I became Chairman at that time and several brave Trustees, including John, joined me. Like me, John continues as a Trustee on what has been an exciting ride.

Today Professor Graham Le Gros and his team of some 85 staff and researchers concentrate around a core of immunology research, with specific application to cancer and inflammation/allergy. The recent announcement by the Health Research Council of New Zealand of a \$6.2 million investment into allergy research here at the Institute shows how far we have come.

In sharing these memories of my involvement with the Institute I realise there are simply too many individuals and organisations to thank. The success of the Institute has been driven by the goodwill of people like you and I thank you for joining us on the next stage of our journey.

08 - 13



Phase I GBM clinical trial - Undertaken in collaboration with Wellington Hospital to test the feasibility and safety of using dendritic cell vaccines in combination with temozolomide chemotherapy to treat patients with recurrent glioblastoma multiforme.

09

Green chemistry - less toxic chemical process developed for making a specific class of chemical compounds used in medical therapy.

10

Early gout detection - gouty arthritis clinical study identified markers of disease susceptibility.



Hookworm vaccine - made pivotal discovery that could lead to a vaccine against hookworm, a parasite that infects one billion people worldwide.

11 - Present

Gouty arthritis - challenged current dogma that monocytes function to resolve inflammation during an acute gout attack, instead showing that they exacerbate inflammation. Clinical studies highlighted important role of serum uric acid levels in modulating this response.

13

Immune cell discovery - identified unique type of immune cell in the skin that could explain cause of skin allergy. This discovery is the next step towards creating a vaccine for allergies.

13 - 15

Phase I melanoma vaccine clinical trial - to assess the safety, feasibility and efficacy of using a cancer vaccine formulation that incorporates a novel immune-boosting adjuvant.



Grab a friend and join us in the Run for Research!

Here's your chance to take part in the much-loved AMI Round the Bays and help raise important funds to support research into diseases affecting our friends, families and community.



With summer fast approaching, so too is another exciting event – the 2014 AMI Round the Bays on Sunday 23 February! Once again we're the Official Charity Partner of this iconic event and will be holding our annual Run for Research fundraiser.

Thanks to an awesome group of individuals and teams earlier this year, the 2013 Run for Research raised over \$40,000, an incredible achievement. This time around we hope to reach \$50,000 to support our scientists and we want you to join us to make this possible.

You don't have to be the super fit, athletic kind to take part – the main event is an enjoyable and achievable 7km fun run/walk around the beautiful bays of Wellington, with a 10km or half marathon option for those who want an extra challenge. Whether you approach it as a personal challenge or just a chance to get out and about and enjoy the community spirit while supporting a great cause, grab some friends, family, or colleagues and join us in what will be a fun and rewarding event!



For more information:

- visit www.malaghan.org.nz/runforresearch
- contact Victoria Hale on 04 4996914 ext. 821
- email runforresearch@malaghan.org.nz

‘Piney’ puts his fast foot forward

Newstalk ZB Radio DJ Jason Pine, usually known for his sports radio commentary is jumping into his running shoes once again to take part in the 2014 Run for Research as a Malaghan Ambassador!

Earlier this year, Jason's 7km Run for Research 'debut' resulted in a personal best time of 30:28 and a fantastic \$1,300 raised in sponsorship! Now he is hooked and hoping to complete his first ever half marathon alongside wife and mother of their two children, Rebekah, this coming February at AMI Round the Bays.

"I'm definitely not what most would call a 'runner' but the Run for Research has been the push I needed to get out there, improve my fitness and give something new a go! It is just fantastic to see the community spirit that makes the Run for Research fundraiser the success it is. It's not about being a super athlete, just giving your best for a great cause," says Jason.

"I encourage everyone out there to sign up to Run for Research. It is easy to do and not only will you feel better for it, you will be contributing to research that could change the lives of people we know and love in the future."

Find out how you can join Jason and Rebekah in the Run for Research by visiting: www.malaghan.org.nz/runforresearch



Radio DJ Jason Pine and family

News under the microscope

Hawkes Bay Spring Evening



100 guests recently joined the Hawkes Bay Friends of the Malaghan Institute for Candles, Canapés & Cocktails at Havelock North's Peak Restaurant. Speakers included Matthew Malaghan, Trustee of the Malaghan Institute, Hawkes Bay born and bred Malaghan Scientist Ryan Kyle and Friends President David Mossman.

The evening provided an overall awareness of the current work that is being done at the Institute and also gave our supporters confirmation on the direction that we are heading.

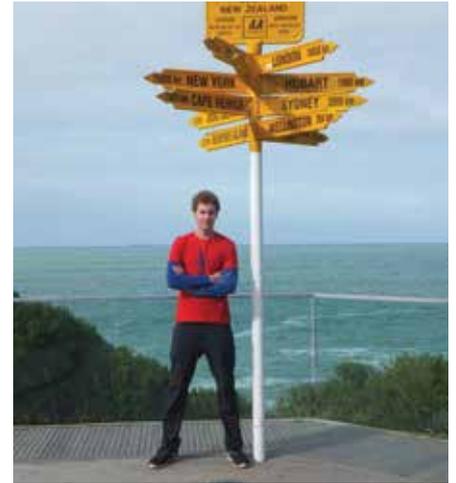
Walking Te Araroa Trail for research

Asha Dowgray has time to kill before returning to study next year. So he has decided to walk the length of the South Island. "I love hiking and getting amongst the outdoors, I've had a lot of good experiences hiking in New Zealand as well as overseas. However this is certainly bigger than any hike or expedition I've attempted in the past" mentioned Asha.

To prepare he trained by hiking over hills with weighted packs full of rocks or bottles of water. Whilst walking the trail Asha is raising awareness and money for the Malaghan Institute along with two other charities.

The Malaghan Institute was chosen because of his grandparents. When he was seven his grandfather died after battling motor neurone disease and earlier this year his grandmother died of cancer. Part of his journey is to pay

homage to the pair. You can follow Asha's hike and add support by visiting: www.hikeforhealth.co.nz



Our Everyday Hero looks forward to spending Christmas Day with her grandmother

Malinda Wynyard hopes that in her lifetime a cure for at least some forms of cancer can be found, or a treatment that doesn't so horrifically damage the patients it is supposed to help. Her family has had their fair share of cancer. Currently her beloved grandmother is suffering from a second bout, this time inoperable.

On Christmas Day, 2013 Malinda will be shaving off her hair, and hopes that her grandmother will be able to remove the first strip knowing that something is being done to help anyone who has suffered like she has.

Malinda says she chose to donate the money raised to the Malaghan Institute because it is an independent New Zealand institution that leads the way in cancer research as well as other widespread serious diseases. "This institute is funded by a variety of charities in New Zealand so I am skipping the middle man and going direct to the source of the research which ensures that as much of the money as possible is going directly into the cancer research fund". To find out more visit:

www.everydayhero.co.nz/malinda



Six ways to support our research:

As New Zealand's leading independent medical research institute, the Malaghan Institute is reliant on grants and public support for its valuable work. We are registered with the Charities Commission and all donations over NZ\$5 are tax deductible. There are several ways for you to get more involved.

To find out more, contact Victoria Hale on 04 499 6914 x 821 or email vhale@malaghan.org.nz alternatively, visit our website www.malaghan.org.nz

1. MAKE A DONATION
2. SET UP AN AUTOMATIC PAYMENT
3. LEAVE A BEQUEST IN YOUR WILL
4. BE A SPONSOR (corporate or individual)
5. JOIN A VOLUNTEER FRIENDS GROUP
6. LIKE US ON FACEBOOK
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