

scope

Reversing the "brain drain"

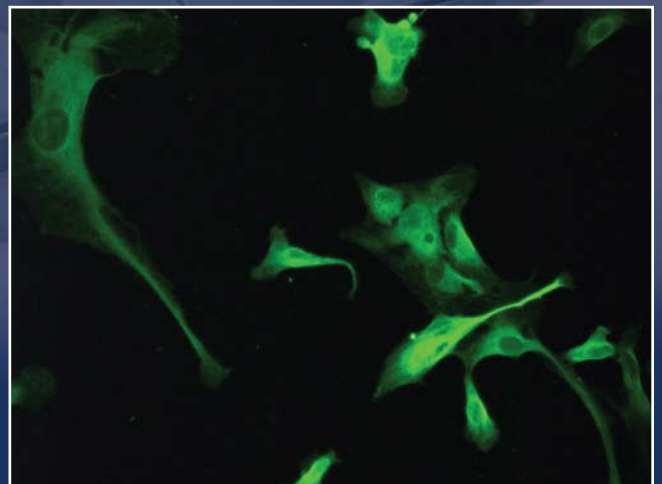
When you first meet the scientists at the Malaghan Institute you might start to think that the "brain drain" we hear so much about in the media is a myth.

With the average age of the Institute staff around 30 to 35, it is easy to overlook the fact that like many research facilities in this country, the Malaghan Institute struggles to find the funding necessary to halt the exodus of our talented young scientists overseas.

In 2007 the Malaghan Institute's mission to support up-and-coming young scientists in establishing their research careers here in New Zealand, received a significant boost with several of our early stage research scientists competing successfully on a national scale for NZ Lotteries funding.

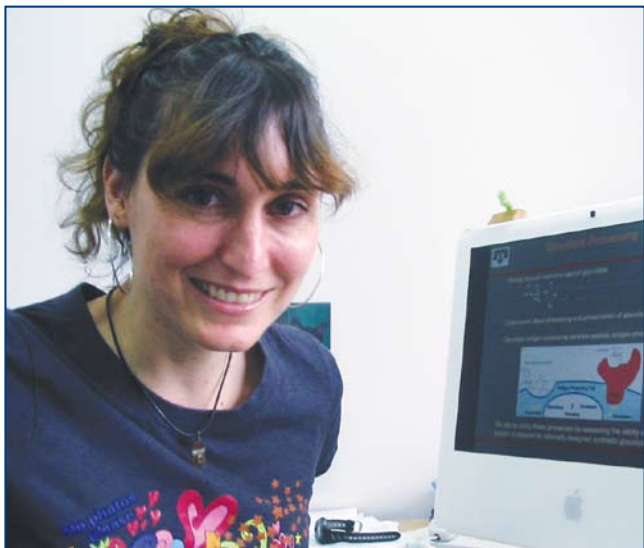
These bright young individuals, several of whom are profiled in this issue of Scope, bring an unparalleled level of energy and vitality to our scientific programmes and are essential to the continuing success of scientific research in this country.

(right) Brain cells (image kindly donated by Nina Baker and Dr Melanie McConnell)



"...bright young individuals...bring an unparalleled level of energy and vitality to our scientific programmes"

A sweet solution to asthma and cancer



Dr Bridget Stocker

In the last issue of Scope we introduced Dr Bridget Stocker. Dr Stocker is a Victoria University chemistry graduate who returned to New Zealand last year following a two-year post-doctoral research position at one of the worlds top synthetic carbohydrate laboratories, the Federal Institute of Technology (ETH),

Switzerland. Working alongside Dr Mattie Timmer from Victoria University, Dr Stocker has established an Immunoglycomics research programme at the Malaghan Institute that is focused on understanding the role sugars play in influencing immune responses. This is a vast untapped area of drug discovery that impacts on our asthma, cancer and tuberculosis research programmes.

Dr Stocker's return to Wellington was prompted by a desire to strengthen the links between chemistry and immunology, and the positioning of New Zealand's leading immunology institute next door to Victoria University's School of Chemical and Physical Sciences provided the ideal opportunity in which to achieve this.

With a purpose-built laboratory currently under construction, Dr Stocker's newly developed research programme promises to make a significant contribution to the New Zealand health research scene and we are very fortunate to have her skills being utilised in this country where they are needed most.

Crystal clear therapies for gout



Willy-John Martin

Willy-John Martin, a talented young PhD student in the Arthritis Group headed by Dr Jacquie Harper, and one of only eight recipients (out of over 150 applicants) of a Māori Education Professions Scholarship in 2007, is looking to advance our understanding of the immune processes that give rise to gouty arthritis.

Gout is caused by the formation of crystals in the joints, resulting in intense pain, swelling and reddening of the skin.

In New Zealand the prevalence of gout is twice that observed internationally and is three times more widespread in Māori and Pacific Island populations. Willy-John's research will be vital for the development of new therapies for the treatment of this incredibly painful disease.

PhD graduate heads to elite American institute



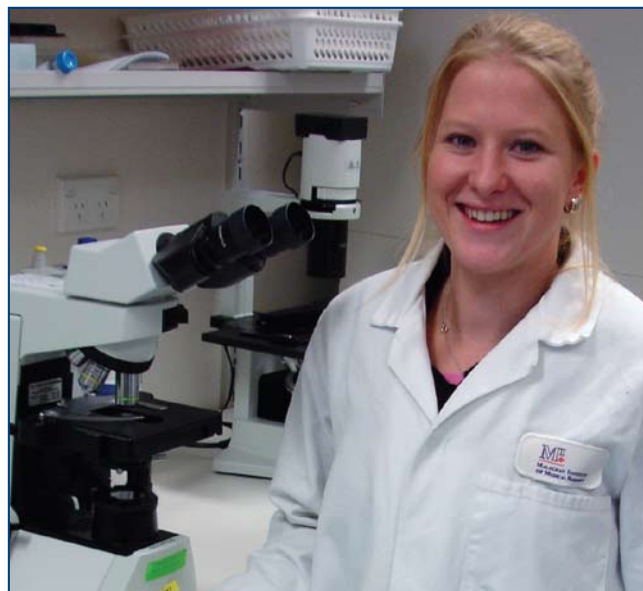
Dr Nicholas van Panhuys

Laboratory experience in an overseas research facility is recommended for any young scientist that wishes to establish their career back here in New Zealand. Malaghan Institute graduates are considered amongst the best in the country and are consequently highly sought after.

In April of this year we farewelled one of our rising young stars, Dr Nicholas van Panhuys, to the prestigious National Institutes of Health in Bethesda, USA. Dr van Panhuys' PhD studies in Professor Graham Le Gros' Asthma Group have challenged our current understanding of the immune responses that give rise to allergy and asthma and he will now continue this provocative research alongside world-renowned immunologist Professor Ron Germain.

We wish Dr van Panhuys well and will keep you updated on his research progress.

Stirring lost memories with designer vaccines



Lisa Goldsack

With an extraordinary gift for thinking abstractly and an intelligence and passion for immunology that is second to none, Infectious Diseases PhD student Lisa Goldsack is a formidable force in the fight against tuberculosis (Tb). The currently available vaccine against Tb, BCG, is good at protecting infants and young children from the disease but has little effect in adults.

It is estimated that one New Zealander a day is being newly diagnosed with Tb, and with the increasing incidence of antibiotic-resistance, we urgently need preventative measures such as new vaccines. The focus of Lisa's PhD research is on understanding why the immune system appears to forget how to protect adults from developing Tb, and how we can use this information to design more effective vaccines that stimulate life-long immunity against the bacteria that cause the disease.

Supervised by Dr Joanna Kirman, Lisa was successful in publishing her theoretical work in the international scientific journal *Tuberculosis* in 2007 and her research is considered to be at the cutting edge of New Zealand vaccine development and design.

Restoring balance to the lives of MS sufferers

Modestly describing herself as a “jack of all trades, master of none”, Dr Elizabeth Forbes’ larger than life personality is matched only by her unwavering enthusiasm and drive to improve the lives of those affected by the debilitating autoimmune disease Multiple Sclerosis (MS).

After completing her undergraduate degree at Victoria University, Dr Forbes began her PhD in gastrointestinal allergy and inflammation at the John Curtin School of Medical Research, Australian National University, Canberra, Australia. During her PhD Dr Forbes was awarded a Fulbright scholarship, which allowed her to finish her studies at the Cincinnati Children’s Hospital Medical Center, USA. As the recipient of such a prestigious award, Dr Forbes was bonded back to New Zealand on completion of her PhD, and the Malaghan Institute Multiple Sclerosis Group, led by Associate Professor Thomas Bäckström, provided the ideal opportunity in which to further her research career.

Affecting one in every 1,100 New Zealanders, there is no known cure for MS. In a healthy individual, the immune system maintains a

balance between triggering an inflammatory response and an equilibrium maintained by cells that regulate it. In MS, this balance is disrupted.

The therapeutic goal of Dr Forbes’ research is to re-establish this immune equilibrium in individuals suffering from MS - to restore the balance.



Dr Elizabeth Forbes

Anonymous US donor challenges NZ Malaghan Supporters

Earlier this year we were fortunate to be the recipient of a large anonymous donation. This benefactor is an alumnus of Victoria University now residing in the United States and was identified through a partnership between the Malaghan Institute and the VUW Foundation.

They have very generously given half a million dollars to be used to further the development of a vaccine against cancer.

The donor wishes to remain anonymous, but fervently believes in the work of the Malaghan Institute and is hoping that the gift will inspire additional generosity from the New Zealand based supporters of the Institute to help grow this vaccine fund.

Feel inspired?

To find out how you can help, please call the Malaghan Institute on 0800 MALAGHAN (0800 625 2442)

Last year we were very fortunate to welcome two clinicians to the Malaghan team, Dr Robert Weinkove and Dr Noriyuki Enomoto.

the most common blood cancer in New Zealand. Working in conjunction with the Wellington Blood and Cancer Centre, Dr Ian Hermans and Professor Franca Ronchese, Dr Weinkove plans to harness a rare blood cell type called natural killer T cells to improve the ability of a patients' immune system to fight their leukaemia.

With its certified GMP laboratory capable of manufacturing human cellular vaccines, world-class researchers and facilities, and the skills of top clinicians such as Dr Weinkove and Dr Enomoto, the Malaghan Institute is ideally poised to translate its research findings from the laboratory bench into the clinic.



MALAGHAN INSTITUTE
OF MEDICAL RESEARCH

Please call **0800 MALAGHAN** (0800 625244) to find out how to become a regular donor

2008 Lollipop Appeal

The 2008 Lollipop Appeal held on February 29th, in the greater Wellington region was again a huge success. It has been an annual fixture for over ten years now and thanks to the brilliant organisational skills of the Wellington Friends of the Malaghan Institute, there were over 300 volunteers out and about in the region shaking their buckets on our behalf.

An amazing \$45,000 was raised which will be put to good use supporting our research groups. Thanks also to AMI, our wonderful principal supporter; Clemenger BBDO who developed our awesome new advertising; and Allens who supplied all the lollipops we gave out on the day - over 15,000 in fact!

Dr Grainger on Good Morning



As part of our publicity for the Lollipop Appeal, Dr Rebecca Grainger appeared on the Good Morning Show to promote not only the Appeal, but her research into Gout and the overall work of the Malaghan Institute. Her interview was very well received and it meant that the important work of the Malaghan Institute was broadcast into over 200,000 homes nationwide!

Pictured above: Dr Grainger being interviewed by Brendan Pongia on the Good Morning Show in February 2008

Seen our new Website?

Thanks to the wonderful help from the people at Creative Design in the Hawkes Bay, we now have a fantastic new website.

Launched in December 2007, you can now read about our latest news and events, keep up-to-date with the research developments and even make an online donation. To see it for yourself, visit www.malaghan.org.nz

Grants Received (Oct 07-Apr 08)

We would like to thank the following supporters for their generosity, which has enabled us to purchase vital equipment for our research groups:

- Pub Charity
- Lion Foundation
- Infinity Foundation
- Southern Trust
- Caversham Foundation
- The Trusts Charitable Foundation
- Jennie Burns Trust
- Loyal Orange Lodge - Wellington District Chapter

Up-Coming Events

- | | |
|-----------------------------|---|
| 14 August
(Auckland) | Charity Dance
St Marks Church Hall, Remuera
For ticket info please email:
judyjordan@xtra.co.nz |
| 31 October
(Hastings) | Malaghan Golf Tournament
Hastings Golf Club |
| 31 October
(Auckland) | AMI Malaghan Golf Tournament
The Grange Golf Club |
| 14 November
(Wellington) | ING NZ Malaghan Golf Tournament
Manor Park Golf Club |

For info about the 2008 Golf tournaments please email: Tanya Fulcher
tfulcher@malaghan.org.nz



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