

# scope

## Top Honour for Young Scientist

For her groundbreaking research into the development of designer vaccines for the treatment of cancer, Malaghan Institute PhD student Dianne Sika-Paotonu was named winner of the HRC Advancing Human Health and Wellbeing category of the 2008 MacDiarmid Young Scientist of the Year Awards.

These awards are presented by the Foundation for Research, Science and Technology in recognition of New Zealand-born Nobel Laureate Professor Alan MacDiarmid, to celebrate the achievements of New Zealand's future leaders in science.

The focus of Dianne's PhD research is to improve the activity of a rare group of immune cells called dendritic cells. These cells are able to stimulate the immune system to attack cancerous tissue and are a critical component of the cancer vaccines created at the Malaghan Institute. By developing ways to make the cancer vaccines work even better, Dianne's cutting-edge research brings us one step closer towards a highly effective, more natural cancer therapy that doesn't have the side-effects of conventional cancer treatments.

**"Cancer is a terrible disease and we need to support bright young New Zealanders such as Dianne to ensure our future."** *Professor Graham Le Gros, Director.*



*Dianne being presented her award by Professor Graeme Fraser, Chair of the Health Research Council of NZ.*

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## Taking our cancer vaccine to the next level

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In the first of its kind for Wellington, the Malaghan Institute is combining its expertise in immunology and oncology with the engineering research institute, Industrial Research Limited (IRL), to unlock the enormous commercial potential of our cancer vaccine. The collaboration brings together the cancer vaccine developed at the Malaghan Institute with a compound developed by IRL that makes the vaccine work even better. With \$750,000 for the next three years from IRL, Grow Wellington and Victoria University's private enterprise liaison Victoria Link, the science-business collaboration hopes to carve out a slice of the burgeoning global vaccine market, which is worth around \$16 billion dollars.

As the Malaghan Institute is a charitable trust there is a no real outlet for us to be able to develop the vaccine on our own. By sharing the 'fruits of our discoveries' and working together with other organisations we have the opportunity to produce something that will have a significant impact on



the health of New Zealanders. Any value that arises from the venture will be directed back into supporting the Institute's research programmes.

"There is an unmet need for such vaccine products in this country," said Professor Graham Le Gros. "We hope our teams can crack it by working together to get it into the clinics."

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## International award for anti-inflammatory research

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Malaghan Institute scientists Dr Jacque Harper and Professor Mike Berridge were key members of a team of marine and cell biologists and chemists from around New Zealand recently awarded the



prestigious Arthur E Schwarting Award for best paper published in the international Journal of Natural Products in 2007.

The paper describes the discovery of two novel natural compounds from a sea squirt found in New Zealand's coastal waters that halt the development of inflammation.

Inflammation is common to many debilitating human diseases including arthritis, asthma and cardiovascular disease, and alternative anti-inflammatory treatments are desperately needed.

This research suggests that the simple sea squirt might just hold the answer scientists have been looking for.

## The changing face of Malaghan MS research



After almost 11 years at the helm of the Multiple Sclerosis Research Group, Associate Professor Thomas Bäckström (pictured above) is leaving the Malaghan Institute to take up a position at Novo Nordisk in Denmark. Novo Nordisk is a world leader in diabetes care, producing insulin for half of the European and USA diabetic markets. In his new role Assoc Prof Bäckström will head Novo Nordisk's T cell Biology Department, providing the potential opportunity for the development of close linkages between the Malaghan Institute and one of the world's major pharmaceutical companies.

Since his arrival at the Malaghan Institute in 1997 from Sweden, Assoc Prof Bäckström has worked tirelessly to establish the laboratory models and technology required to study this most complex of diseases. In individuals with multiple sclerosis (MS) the body's immune system attacks the myelin tissue of the central nervous system, disrupting the brain's ability to control such functions as seeing, walking and talking. Scientists do not yet know what triggers the immune system to do this.

Some of the highlights of Assoc Prof Bäckström's research include the establishment of the EAE (experimental autoimmune encephalomyelitis)

model to study multiple sclerosis; the discovery that the symptoms of disease in the EAE model can be improved through the use of specially designed immune-modifying therapeutic agents; and that the activity of immune cells called regulatory T cells, play a crucial role in determining this outcome.

We will very much miss the passion and intellectual insight that Assoc Prof Bäckström has brought to the Malaghan Institute and the NZ health research scene and sincerely thank him for the significant contributions he has made to MS research in this country.



*Dr Anne La Flamme*

Assoc Prof Bäckström's departure does not mean an end to MS research at the Malaghan Institute. It is with great pleasure that we announce that the MS research mantle is to be handed over to Dr Anne La Flamme, a senior immunologist from Victoria University who has been a research consultant of the Malaghan Institute since 2001 and has published alongside Assoc Prof Bäckström on several pivotal research discoveries.

Dr La Flamme has a particular research interest in macrophages, an immune cell type that plays a critical role in regulating the immune responses in the EAE model, and schistosomiasis, a parasitic disease that appears to offer protection against the development of MS.

With Dr La Flamme on board the Malaghan Institute will be able to continue the leading-edge research pioneered by Assoc Prof Bäckström, thus ensuring our commitment to understanding both the causes of MS and the development of immunotherapies to halt its progression.

## Pillar of Immunology

Pioneering research published by Malaghan Institute Director Professor Graham Le Gros early on in his career, has received the highest of honours by being selected as a "Pillar of Immunology" by international leaders in the field. To date there have only been 30 such research papers (out of the many hundreds of thousands going back to the 1960s) that have been awarded this prestigious title.

The extraordinary scientific insight provided by Prof Le Gros' ingenious approach to understanding the basic biology of IL-4, one of the most influential proteins of the immune system, is as relevant today as it was when it was first published back in 1990. The landmark research was undertaken while Prof Le Gros was a Postdoctoral Fellow in the laboratory of Dr William Paul at the National Institutes of Health, Bethesda, USA.

Although there have been significant advancements in our understanding of how IL-4 controls and directs immune responses since this work was first published, Prof Le Gros' research has withstood intense scientific critique for nearly 20 years, thus cementing its place in history as a classic immunology discovery.

The Malaghan Institute is proud to congratulate its Director on this remarkable achievement.



*Professor Graham Le Gros*

## The Ultimate Gift

The ultimate gift to show your support for the research of the Malaghan Institute, and our hope for a disease-free future, is a bequest in your will.

As a charity, the Malaghan Institute relies on the generosity of its supporters to continue our work, and a gift in your will is a way of ensuring our research into Cancer, Asthma, Arthritis, Multiple Sclerosis and Infectious Diseases will protect future generations from disease well beyond your lifetime.

To receive information about leaving a gift in your will and how these funds are managed, please tick the box below and enter your contact details on the reverse of this form.

**Yes, please send me information on how I can leave a gift in my will and invest in a disease-free future**





## Betty Fleet - a volunteer profile



*Betty's dedication to the Malaghan extends to her jewellery!*

The first thing that struck me when I met the Fleets in early 2007 was their wonderful sense of humour and passion for life. Betty and her husband Alan have been tireless volunteers for the Malaghan Institute for over seven years and they prove that you don't have to

be Bill Gates in order to make a difference for an organisation. Betty tells me that the reason they became volunteers in the first place is "because it makes us happy to be able to contribute in a meaningful way to causes that we really believe in. We can't give away millions of dollars, so we give away our time."

Sadly, Alan passed away in September last year after a sudden bout with cancer. Instead of this slowing her down, it seems to have made Betty all the more determined to help in whatever ways she can. It is about this time of year that

she and I get together for our "Lollipop meeting" and brainstorm about how we are going to get more volunteers collecting out on the streets. She is super organised with a wee notebook full of names and she is not shy to call people up to ask them to help!

What makes her even more remarkable is the fact that the Malaghan Institute is not the only organisation that Betty volunteers for; she also collects regularly for nine other charities. But of course, the Malaghan Institute is her favourite!

And as far as favourites go, Betty is definitely one of ours.

**The Malaghan Institute is fortunate to have around 200 volunteers all as wonderful as Betty. However, we are always looking for more helpers – especially for our Lollipop Street Day in February each year. If you think you might be interested in becoming a Malaghan volunteer, please call 0800 MALAGHAN.**

This newsletter was generously supported by:



**0800 MALAGHAN (0800 625 244) TO MAKE A CREDIT CARD DONATION**



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FREEPOST 3554 If you wish (a stamp would help our efforts)  
 PO Box 7060, Wellington South

- I/We enclose a donation of \$ \_\_\_\_\_ .00  
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Please send me information on how I can leave a gift in my will and invest in a disease-free future

Please call **0800 MALAGHAN (0800 625 244)** to find out how to become a regular donor

## Supporter Survey

Thank you very much to everyone who took the time to respond to the Survey we sent out with the last Scope. We had over 750 replies and are still working our way through all of them! Those of you who had queries for us, please be assured we will be in touch with you all before the end of October.

## Malaghan in the News

The Malaghan Institute has received some great coverage from the National Radio programme 'Our Changing World' during the past few months. They feature some of our brilliant scientists talking about their research and are very interesting. If you didn't catch the interviews, please go to our website and click on the News and Events menu tab and select the interview you want to hear.

## Upcoming Events

### 31 October

Malaghan Golf Tournament,  
Hastings Golf Club, Hawke's Bay

### 31 October

AMI Malaghan Golf Tournament,  
The Grange Golf Club, Auckland

### 14 November

ING NZ Malaghan Golf Tournament,  
Manor Park Golf Club, Wellington

### 26 February, 2009

2009 Lollipop Street Appeal,  
greater Wellington region – look out for  
our collectors!

For more information about any of the above events, please contact Tanya Fulcher (tfulcher@malaghan.org.nz)

## Grants Received (Apr 08 – Sept 08)

We would like to thank the following organisations for their generous support of our research.

- **Infinity Foundation Limited**
- **Pub Charity**
- **Cuesports Foundation Limited**



**Sign up for Buzz  
& Earn Donation  
Dollars**

We have recently been offered a new fundraising opportunity that will take little time on your part, but that will be a huge help to our fundraising efforts. (Over \$45,000 has been paid to five other NZ charities over the past 18 months).

In brief, if you and your family members are prepared to register with our fundraising partner, Buzz Channel Ltd (Buzz) to do the occasional survey by email, each time you do one we'll get a donation.

If you think this is something you would like to do, please visit our website ([www.malaghan.org.nz](http://www.malaghan.org.nz)) and click on the Buzz Channel link on our home page.

## Scope 36 Donations

A huge thank you must go out to all our wonderful supporters who sent in a donation in response to our last Scope Newsletter. At the time of going to print, we had raised an amazing \$60,402.50!

**THANK YOU!** – This support will enable our researchers to continue their valuable work into improving the health of all New Zealanders.



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