



## a word from the Director

Welcome to the first issue of Discovery, the new ANZAC Research Institute Newsletter, aiming to inform you about new developments and ongoing research projects at the Institute. We will also introduce some of our top scientists that we are fortunate to have working here.

With support from the State and Federal governments, the Institute opened in late 2000. Within a few years we have become the fastest growing medical research institute in NSW providing a scientific home for nearly 100 scientific staff including over 30 postdoctoral scientists and nearly 30 research students. We have 8 major research groups all linked by the common theme of Ageing. Through our work and hard-won discoveries, the Institute's mission is to promote healthy ageing in our community so that people in our community can lead independent and enjoyable lives for as long as possible. Our motto is to prevent the preventable and delay the inevitable.

This newsletter highlights the first major program grant on the Concord campus, the prestigious award of nearly \$4 million over 5 years by the Cancer Institute NSW of a Translational Program Grant on Colo-rectal Cancer. This is a

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## Taking a positive view

In January this year, and at the age of 34, Andrew Klemens was diagnosed with bowel cancer.



### KEEP THE FAITH – THE BON JOVI SHOW

Friday August 17  
Panthers Club



After months of chemotherapy at Concord Hospital, Andrew had recovered sufficiently to be able to fly to Fiji in May for a diving holiday.

“Professor Stephen Clarke tells me the tumour is shrinking and I have full liver function back,” said Andrew. “It’s just so good to feel that I have my life back.

“I think it’s so important that people like me take a positive view of what’s happening, and fight the disease, because there’s only so much the doctors can do themselves. Cancer shouldn’t be the end of the world – it’s manageable.”

Andrew is typical of the patients who could benefit from the outstanding research into the symptoms and treatment of colo-rectal cancer being carried out by scientists

based at the ANZAC Institute. With a family history of the disease, he was always going to be at risk of developing bowel cancer himself.

Andrew closed his flooring business when he began treatment, so he could concentrate on fighting the disease. But he maintained his other love – music, as the front man for his Bon Jovi cover band.

And to demonstrate his gratitude to the doctors and scientists fighting bowel cancer, Andrew is organising a benefit concert at the Panthers Club, with all funds raised going to the Concord campus cancer research program. “Keep the Faith – the Bon Jovi Show” will take place on Friday August 17th.

terrific achievement by the research group headed by Professor Stephen Clarke, the head of our Cancer Pharmacology group. This team based at ANZAC Research Institute unites physicians, surgeons, nurses and scientists from many campuses around Sydney. They aim to develop new approaches to better diagnose and treat colon cancer, a major cause of preventable cancer death in Australia.

Do you know that in Australia men live on average 7 years less than women?

Another major development has been the Institute's spearheading over recent years the creation of a new Asbestos Disease Research Institute to be side by side with the ANZAC Research Institute. It's great news that this \$18 million development is well underway and due for completion in second half of 2008. When completed, this will triple the research capacity of the Concord campus. The new research facility aims to combat mesothelioma, the asbestos cancer, which is a devastating and so far incurable cancer. The Concord campus will develop medical care and research into asbestos as one of its major research efforts.

I hope you find this newsletter interesting and informative. We really do depend on your support in all sorts of practical ways. Attracting and keeping top scientists and providing them with the best available equipment and working environment is a big challenge for the Institute. If you have ideas or ways to encourage our work or even if you would simply like to know more about the many other cutting edge projects now underway, please contact us or check out our new website [www.anzac.edu.au](http://www.anzac.edu.au).

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## Institute scientists to lead the way in bowel cancer research

**A GRANT OF ALMOST \$4 MILLION** will provide significant impetus to the colo-rectal cancer research program based at Concord Hospital and ANZAC Research Institute, and greatly boost Australian and international efforts to combat bowel cancer, one of the major causes of death for Australian men and women.

The NSW Cancer Institute has awarded a Translational Grant of \$3.745 million over the next five years for Concord-based medical scientists to lead the research co-ordinated through the Institute, and which also involves Macquarie University, the Royal Prince Alfred Hospital, the Garvan Institute and the NSW Health Department.

"It is great to have the work of Professor Clarke's team based at the Concord Hospital campus recognised as a major centre for colo-rectal cancer research and treatment," said the director of the ANZAC Research Institute, Professor David Handelsman.

"This program, based here, has the potential to develop new ways of screening, treating and possibly even preventing one of the most common and lethal forms of cancer."

The head of the research program, Professor Stephen Clarke said the research

had been under way for about two years and had already provided interesting and promising results.

"We are finding new patterns of proteins that we need to validate in large

Did you know that more men die from prostate than women from breast cancer?

numbers of patient samples," he said.

"This will involve the measuring of differences in proteins within the body, in varying circumstances in bowel cancer.

"First we will look for differences in proteins in the tumours and in the normal tissues of patients whose cancers have come back after surgery, compared with those patients who have remained well," said Prof. Clarke.

"Secondly, we will search for proteins in blood from patients who develop side-effects from chemotherapy, compared with those who don't.

"And thirdly, we will look for proteins that will provide an early indication of the cancer wasting syndrome known as cachexia, which is responsible for about 30 per cent of cancer deaths.

"The grant from the NSW Cancer Institute will assist in allowing our group based at the ANZAC Research Institute to take this investigation much further," Prof Clarke said. "And we expect the project will provide us with improved prognostic skills and new targets for novel cancer treatment."

More than 4000 Australians die each year from colo-rectal cancer, which is the 7th most common cause of death for males and 9th most common in females. In 2004 2215 males died of bowel cancer and 1911 females.

Did you know that most men who live to retirement will develop cancer cells in their prostate but only a few will have the cancers escape and kill them?



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“There are nearly 50 potential genes mapped for this disease, and of these, we’ve found about 21,” says Marina.

“We argue that while CMT and some of the diseases we work on are rare, they become a silent

burden on our health system, due to the long term disability involved with these disorders.”

While Marina pays tribute to Prof. Nicholson and his international reputation, she herself is rapidly gaining a profile beyond Australian shores. In January this year she was invited to a conference in Oman, where she taught gene mapping techniques to scientists from throughout the Middle East. She has also been invited to return to the world renowned Cold Spring Harbor Laboratory outside New York as a visiting researcher and lecturer.

As Marina says, the Institute’s Neuroscience Laboratory has stayed on the cutting edge of genetic research – and it’s rewarding to see that is being recognised by scientists elsewhere.

## Staff profile:

DR MARINA KENNERSON

Marina Kennerson has been with the ANZAC Institute since its inception, working closely with Prof. Garth Nicholson, in the Northcott Neuroscience Laboratory.

Her training is in gene discovery, and she is currently leading a team of researchers investigating the most common group of hereditary disorders, known as Charcot-Marie-Tooth neuropathy.

CMT involves the dying of both motor and sensory nerves and affects about 8000 Australians.

“It’s not fatal but we consider it to be an important disease,” says Marina, “because the way you find out how a normal gene operates is by being able to see it in relation to disease. If you can see the nerve in the diseased state, then that gives us an insight into what the normal function should be.”

In collaboration with researchers in the USA, Marina and her team hope to identify the gene responsible for CMT, then hand their findings to the cell biology group, with the aim eventually of developing a drug therapy. Their work has been enhanced by the commissioning of a LightScanner machine – the first to be used outside the USA – which speeds up DNA mutation analysis.

For the latest news,  
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[www.anzac.edu.au](http://www.anzac.edu.au)

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