Our Institute’s link with ANZAC Day

As the 96th anniversary of the landings at Gallipoli approaches, we at the ANZAC Research Institute are more conscious than most in the community of the debt all Australians owe our veterans.

Our Institute carries the name of the Australian and New Zealand Army Corps in tribute to our military history and as living legacy for the health of future generations, recognising the Institute’s location on the historic Concord Hospital campus, its links with the University of Sydney, and its foundation as part of the “Australian Remembers” commemoration program of 1995.

Concord Hospital was commissioned in 1939 as a general hospital for the Army and when completed three years later, it was the largest hospital in the southern hemisphere, with 2000 beds. During WWII it was known as the 113 Australian General Hospital, then post-war as the Repatriation General Hospital, Concord.

In 1963 it became a teaching hospital for the University, and in 1993 was transferred from Commonwealth administration to the NSW Department of Health, taking on its current title of Concord Repatriation General Hospital.

The ANZAC Health and Medical Research Foundation was established in 1995 when Australia commemorated 50 years since the end of WWII. Through its dedication to the future welfare of the veteran and war widow community and their children, the ANZAC’s research aims to improve the health and medical care of all Australians.

A decade after the ANZAC Research Institute opened, it strives to continue a vital legacy of public service and the high ideals that the ANZAC name enshrines.

Alarm bells ring for Veterans’ wives

More than 30 years after the war in Vietnam, the female partners of men who served there are showing alarming levels of mental illness, with symptoms in some cases 20 or 30 times higher than in the general population.

The ANZAC Research Institute’s Dr Brian O’Toole has been studying a large group of veterans and their families for the past 20 years, and his latest findings, published in the US Journal of Nervous and Mental Disease, confirm for the first time that mental illness among veterans’ wives is not only more prevalent, but also increasing.

“There are very strong effects three decades beyond the war,” says Dr O’Toole.

“It’s still having an effect on the women and it’s getting worse as they get older. We’d normally expect the prevalence of mental disorders to reduce with age but that’s not what we find here – it’s increased with age.”

Dr O’Toole and his team interviewed more than 240 women, 37% of whom had married their husbands before they served in Vietnam.

“And these are the ones that talked to us – there are women who wouldn’t talk to us. And some Diggers said “no, won’t let you talk to her.” So I suspect this is on the bright side – the real situation could be worse.”

Dr O’Toole reveals that anxiety disorders and severe recurrent depression are among 11 of 17 psychiatric diagnoses that are significantly higher than in the Australian population at large. Veterans’ combat and post-traumatic stress disorder are significant predictors of women’s depressive disorder, particularly severe depression.

Among the survey’s findings are the following:

- alcohol use disorder, reported by 1.3% of veterans’ wives, is not significantly greater than in the wider population
- a single episode of moderate depressive disorder, at 13.9%, is 5 times more common that in the community
- a single episode of severe depressive disorder, at 13.1% of the wives, is more than 6 times higher than in the community
- recurrent severe depression was found in 11.8% of veterans’ wives, which is 33 times higher than in the wider population
- dysthymia (being constantly in a dark, gloomy mood) affected 12.7% of the wives, almost 9 times higher than in the community
- agoraphobia with panic (a fear of being in crowded places or in wide open

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Exciting research helps fight adverse side effects of glucocorticoids

Throughout the world glucocorticoid drugs, such as cortisone, are prescribed commonly to treat various inflammatory disorders, such as rheumatoid arthritis, irritable bowel syndrome and psoriasis.

But long-term use of these drugs tends to produce unfortunate side-effects such as hyperlipidaemia (increased lipids in the blood) and higher levels of cholesterol.

"Obesity is a problem, especially with fat accumulation in the torso, and the big problem is Type 2 diabetes" says Dr Tara Brennan-Speranza, who joined the Bone Research Program at the ANZAC Research Institute last year.

"It sounds like metabolic syndrome, which we associate with middle-aged men and women, but it's not caused necessarily by their diet or lifestyle so much as the drugs they take for an underlying inflammatory disorder."

Dr Brennan-Speranza has been awarded an NHMRC Training Fellowship for her work in looking for new ways to prevent glucocorticoid-induced obesity, diabetes and bone-wasting, which worldwide affects millions of patients.

"We think that the bone cells produce proteins – particularly a protein called osteocalcin – that might play a role in this," she explains.

"In a normal body the protein keeps these things in check, and when we give glucocorticoids to treat another disease this protein is decreased dramatically. We see that in patients all the time. You give glucocorticoids to a patient and the osteocalcin protein decreases to almost zero. And at the same time we see these side-effects."

Dr Brennan-Speranza has been using mice which have already had their tolerance to insulin reduced to identify the actions of this protein and find ways of overcoming the side-effects of glucocorticoids.

"We were able to send small amounts of DNA into the liver and have the liver express this protein instead of the bone cells. We found the liver can do that if we tweak the DNA just a little bit so the liver is able to process it," she says.

"We're finding that these mice that are receiving the drug and expressing the protein in the liver instead of the bone cells have a lesser resistance to insulin. So it looks like we're able to re-deliver that protein from another part of the body and increase the tolerance to insulin once again.

"This is the real cutting edge research."

After graduating from Sydney University and beginning her research career there, Dr Brennan-Speranza joined Geneva University in Switzerland where her study of osteoporosis in rodents was published widely in scientific journals and won her the Young Investigator Prize from the European Calcified Tissue Society.
A generation of medical students lost

On ANZAC Day, as we commemorate the deaths of so many young Australian and New Zealand lives, it is easy to overlook the impact that wars have had on other nations. Turkey, for example, also suffered grievous losses in the Dardanelles campaign of World War I.

Here at the ANZAC Research Institute a tragic story that resonates with us is that of Turkey’s lost medical class of 1915.

After the Allied attack at Gallipoli thousands of young Turks volunteered to join the army as reinforcements. Among them were students of the Istanbul Darülfünun (today known as Istanbul University) who were accepted by the 2nd Battalion and posted to Ari Burnu at Gallipoli.

May 19 1915 was a day of complete carnage for both sides at Gallipoli, as the Turks launched a night assault, hoping to drive the Australians and New Zealanders back to the beach. Four divisions of Turks, numbering between 30,000 and 40,000, charged at the 12,500 ANZAC troops. By mid-morning 3000 dead Turks lay in front of the Allied trenches and another 7000 had been wounded.

Among the Turkish dead was every soldier in the 2nd Battalion. They included the cream of Turkey’s medical students: the Medical School of Darülfünun had lost its entire class of 1915. None was left to graduate in 1921.

The ANZAC Research Institute’s Professor Garth Nicholson has long expressed a wish to honour the memory of those students by establishing a medical exchange program for undergraduate and postgraduate medical students. There is no shortage of support from colleagues at the Institute or at the University of Sydney, and Professor Nicholson’s counterpart in Turkey, Dr Fatma Ozlen, has also been encouraged by the University of Istanbul.

Finding the right format for a medical exchange program, and more importantly, finding the money to fund it, have proved to be obstacles so far. But if it can be funded the program would have the enthusiastic backing of the Institute’s Board.

“It would be wonderful if we could gain the support of business interests in Australia and Turkey to make this student exchange a reality,” says the Institute’s Director, Professor David Handelsman.

“In a practical way this would commemorate the ANZAC spirit, creating a healthy legacy for future generations by improving medical knowledge and health care in both countries.”

Our fuzzy wuzzy gets a twin

Visitors to the ANZAC Research Institute recently must have wondered about the unusual structure placed around our “mascot”, the bronze statue of Fuzzy Wuzzy Angel Raphael Gembani helping Pte Dick Whittington at Buna on Christmas Day 1942.

The answer is that our statue will soon have a twin, to be erected outside the education centre at the Kokoda Track Memorial Walkway.

The original is a work by Dr Maryann Nicholls, recently retired chief haematologist at Concord Hospital, and under her guidance, a silicon mould has been placed around the statue so a replica can be cast.

“It’s a very labour intensive process,” says Dr Nicholls. “A plaster mould will be assembled around the rubber mould and then wax will be poured into it to make another mould.

“I’ll work on the wax mould to smooth out the joints and seams, then the outside and inside of the wax mould will be encased in a ceramic shell and it will all be fired in a kiln. When the wax drips out you’re left with a space between the two ceramic layers and then red hot bronze, looking like lava, will be poured into that space and the whole thing will be cracked open after it’s cooled.”

The entire process should be finished in August, ready for the “twin” statue’s unveiling at a ceremony on November 3rd.

Dr Nicholls’ original work, standing 1.3 metres high, was unveiled outside the Institute’s main entrance in July 2001. It is based on a photograph taken by George Silk during the WWII New Guinea campaign and published in Life magazine in March 1943. In the seven decades that have followed it has become a classic symbol of the Kokoda Track campaign.

For Dr Nicholls the statues have been a work of love. Art and sculpting are her passion and in retirement she plans to pursue both.
“Serving on the ANZAC Research Institute Board is a reminder of the responsibilities that go with the ANZAC tradition.”

**Staff profile:**

**PROFESSOR BOB LUSBY**

Around the ANZAC Research Institute Board table, Professor Bob Lusby could lay claim to having the most varied and most interesting background.

Professor Lusby is the head of the University of Sydney Clinical School at Concord Hospital and an Associate Dean of the Faculty of Medicine, as well as heading the hospital’s vascular surgical department. He has been president of the International Cardiovascular Society and its Australian and New Zealand offshoot.

But don’t be surprised if every so often you see someone on the Concord campus inadvertently raising an arm to give Prof Lusby a military salute. Holding the rank of Colonel in the Australian Army Medical Corps, and as a Consultant Surgeon to the Australian Defence Force, Bob Lusby is also a military veteran with extensive overseas experience.

He has served with the United Nations peace-keeping force in the volatile atmosphere of Rwanda, and with the ADF in Bougainville and Timor Leste.

“Serving on the ANZAC Research Institute Board is a reminder of the responsibilities that go with the ANZAC tradition,” says Bob. “The cutting edge research carried out in this fast growing facility reflects the ‘can do’ attitude shown by our service men and women in times of great need. The presence of a major University of Sydney research group on the Concord Campus also helps attract some of the best clinicians and medical students to the hospital to care for our patients and teach the next generation of doctors and nurses.”

Away from medicine and military life, Bob Lusby’s passion is wine. He and his family own and operate the Tintilla winery in the Hunter Valley, producing a wonderful range of wines as well as olive products. Anyone who has attended an ANZAC Research Institute or Concord Hospital function in recent years would have had ample opportunity to taste – and enjoy – Tintilla’s magnificent wines.

So if it’s medical and scientific research you want to discuss with Professor Lusby, see him at Concord – but if it’s the joys of a delicate white or a robust red that dominate your thoughts, you’ll find Bob at Pokolbin whenever his weekends allow.

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