

Under the microscope



NEWS FROM INSIDE THE INSTITUTE FOR OUR SUPPORTERS

SPRING EDITION 2016

Inspiring global initiative against cancer

"Wars are won together," said one eminent speaker at the 16th September official launch of ProCan™, The ACRF International Centre for the Proteome of Human Cancer.

The war on cancer drew an army of supporters on the day, including representatives of both the Prime Minister of Australia and the Leader of the Opposition, the NSW Minister of Health, and the Acting Consul-General of the United States.

ProCan will transform cancer care. Once its five to seven year project is complete, it will provide clinicians with an accurate diagnosis of the cancer subtype and provide a precise

recommendation regarding the treatment options most likely to work for that individual cancer, reducing side effects.

As Kate, the mother of a young child with cancer, said, ProCan already provides something important right now: "CMRI is the place that gives parents like me hope ... a hope that no other child's story has to echo ours."

Thank you for your generous support towards this ground-breaking initiative.

Read more about ProCan at cmri.org.au/ProCan or procan.cancerresearch



Dr Michael Spence, Prof Phil Robinson, Ms Kate Merry, The Hon Catherine King MP, The Hon Dr David Gillespie MP, The Hon Alex Hawke MP, Mr Tom Dery, Professor Roger Reddel



From the Director

Welcome to this Spring 2016 edition of Under the Microscope.

The ProCan launch featured in this issue marks the beginning of a truly international program to change the way we fight cancer. It has been recognised by the US Government's Cancer Moonshot initiative.

Instead of approaching this problem a few cancers at a time, ProCan is analysing 70,000 cancers from samples that will be provided by laboratories and hospitals around the world, building a vast database of information that will help save lives.

I was very encouraged by the widespread support from government, universities, other research institutes, industry and our community partners, all of whom understand ProCan's transformative potential.

The independent support we get from donors like you and the broader community who embrace events like Jeans for Genes is vitally important. It is what makes our research possible.

Thank you once again for your loyal commitment.

Roger Reddel

Lorimer Dods Professor and Director
Children's Medical Research
Institute



Congratulations to our 2016 winners of the Star Alliance Travel Scholarship: First Prize winner - Michael Lee & Runner Up - Pragathi Masamsetti.



This October, set your own goal and ride to fight kids' cancer in the Great Cycle Challenge.

— greatcyclechallenge.com.au



Research Update

Associate Professor Hilda Pickett's work over the last few years has unravelled one mystery after another around the deadly 'ALT' sub-type of cancers. One of these cancers is called glioblastoma, a type of brain tumour that is rapidly fatal in children and adults.

Unravelling the secrets of cancer



More from Associate Professor Hilda Pickett:

It all began by analysing the DNA codes found in the telomeres of ALT cancers. Telomeres are DNA regions that regulate aging and cancer cell growth. Cancer cells do not age. We found an unusual DNA code cropping up again and again. What's more, we discovered that a particular combination of proteins binds specifically to some of the DNA codes in ALT telomeres and is required for these cancers to grow.

Since then we've delved deeper into the details of how ALT functions. We're also developing new ways to mine existing human genome data for clues to speed up this research.

We are now studying how this protein combination works exactly, so we can use this knowledge to block cancer cell growth. The aim is to develop new drug treatments for this class of cancers, especially glioblastoma, where few treatments currently exist.

— Explore more online: <http://www.cmri.org.au/Research/Research-Units/Telomere-Length-Regulation>



FIT in your Jeans for Genes is back!
1st - 30th November 2016. Register today and let's get ready to get healthy for healthier kids!
— fitinyourjeansforgenes.org.au



CMRI Christmas cards now available through christmascards4charity.com.au/cmri
Gifts available from 1st October at shop.cmri.org.au



Associate Professor Jonathan Arthur, Head of Bioinformatics at CMRI.

Bioinformatics accelerates discoveries and is central to the future of medical research.



Q & A

With – Associate Professor Jonathan Arthur

Q: What is bioinformatics?

A: It's a discipline that sits at the intersection of biology, medicine, mathematics, statistics and information technology. Essentially it uses computer algorithms to make sense of large amounts of biological information.

Q: How does research benefit from bioinformatics?

A: Much of the research we do today produces large amounts of complex data from very sophisticated equipment - research such as genomics (the study of genes) and proteomics (the study of proteins in

cells). ProCan, for example, will need a team of bioinformaticians to analyse and understand the huge volumes of data it will produce.

Q: What are you working on now?

A: Bioinformatics people are embedded throughout CMRI, helping to find the genes that cause serious childhood diseases including cancer, analysing telomeres, studying gene networks to understand the causes of birth defects, setting up ProCan.... In all these areas we see how much faster we can work using bioinformatic approaches and techniques. Making sure that we have sufficient bioinformatics support in our research labs is a major challenge for my team.

— Read more online at <http://www.cmri.org.au/Research/Research-Facilities/Bioinformatics>

Jeans for Genes Day

Despite the wet start, Jeans for Genes Day 2016 was a great success. CMRI staff and countless volunteers braved the cold in Sydney and positioned themselves around the city, while CMRI committee members and volunteers set up stalls across the rest of the country, helping to raise money and awareness of our work. The total funds raised have topped more than \$1.6 million so far, and money will continue coming in from supporters until the end of the year.



Upcoming Events

Strathfield Quiz night – Concord Community Club, 1 Gipps St, Concord. 14th October 7pm.

Wagga Christmas Fair – Murrumbidgee Race Course. 23rd – 24th October.

Maroota Fashion Show – Windsor Bowling Club. 27th October 11am.

Maroota Committee Bingo Night – Pitt Town Sports Club. 29th October 7pm.

Melbourne Cup Lunch – Osborne Park Hall, Kangaroo Valley. 1st November 11am.

Gosford Christmas Garden Party – 80 Broadwater Rd, Saratoga. 5th November 1pm.

Mudgee Committee 50th birthday – Heaton Lodge Mudgee. 13th November 12pm

Gerringsong Committee 26th Annual quilt & craft show – Gerringsong Town Hall, 11th - 13th November.

Port Hacking Committee Dinner in the Stables – 18th November 7pm.

Maroota Committee Stall – Windsor Review Shopping Centre. 18th November 8.30am.



Leave a gift of love behind

A gift in your will to Children's Medical Research Institute will mean that you are helping to bring more effective treatments and cures to sick children.

After you have looked after the needs of your family, a gift in your will is one of the most powerful ways for you to make a lasting difference to the lives of Australian children.

These donations are invested into the Institute's Endowment Fund, which we use to help fund our research in perpetuity. Your gift will therefore touch the lives of many future generations of Australian children.

A gift in your will contributes to a future in which children diagnosed with a life-threatening disease can be cured.

How to leave a gift in your will:

A solicitor, trust office or the Law Society in your State or Territory can give you advice about preparing a will. Your first priority should be to provide for the needs of your family. After this, a gift to CMRI could take the form of:

- A specific sum of money, or a percentage of the overall value of your estate.
- A gift of real estate, or of an investment (stocks, bonds, etc.).
- A residual gift (balance of your estate after provisions for family have been met).
- A combination of any of the above.

If you have any questions about leaving gift in your will, please contact Charmian Maguire on 1800 436 437.

Here's what Nigel Armstrong has to say about his decision to leave CMRI a gift in his will.



"I was a postmaster for 38 years, now retired. An everyday person. I have no medical or academic background, but that doesn't stop me from being able to help.

My wife passed away from breast cancer in 2003. After my wife died, I wanted to do something worthwhile.

When I heard about Sir Lorimer Dods, and how he set up the funding for CMRI for the long term, I thought it was a good thing. Research takes 15-20 years or longer, and you can't rely on governments that change to keep it going. The way CMRI is set up, you can be sure a line of research will be followed through to its finality. CMRI's research has the potential to help everyone, children and adults."

Together we can create a healthier future for every child, for generations to come.