

# under the microscope

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## Be a star studded genie!



*Jeans for Genes supporter Ian Thorpe with Megan Mair from Mokem, Julijana Trifunovic and Kelly Morgan from Jeans for Genes with Henry, Annie and William Hudson*

This Jeans for Genes Day we ask all Australians to be a star on Friday August 5. All you have to do is wear your jeans and give a donation or buy a badge.

During the past 11 years over \$31 million has been raised from this special event alone, helping the Children's Medical Research Institute to grow and develop. During this time our scientists have made many exciting discoveries and are constantly working on new findings.

Stars from around the world also understand the importance of research and have offered their support in many ways. Australia's 'fish', Ian Thorpe is encouraging everyone to become a 'Genie' (volunteer / supporter). He has allowed us to use his image on our \$10 badge and modelled our 'Jeremy' designer T-shirt. "Research is the pathway to a healthy future. Join me and support Jeans for Genes Day on Friday August 5," said Ian Thorpe.

*Continued Page 4*



# Director's desk

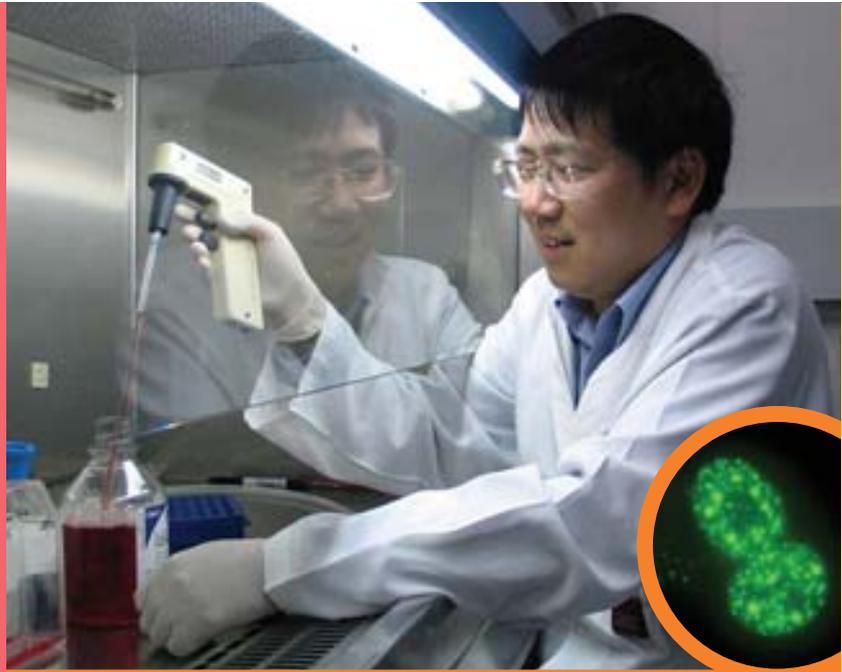


In this issue we highlight the cutting edge research undertaken by some of our more junior staff members. The common theme in all of their studies has been the unexpected directions their work has taken them, opening up important new research avenues. The best experimental result is the one that poses new questions. The capacity to think laterally and to recognise the significance of unusual findings is the mark of the gifted scientist.

This of course is critically important to developing a deeper understanding of the complexity of human biological systems. This research is only possible where scientific staff can engage in long term programmes supported by a strong infrastructure. This infrastructure, however, is only effective when properly maintained and operated and requires the dedication and commitment of key support staff. All too often we forget to acknowledge their contribution to our research. The range of operations from mass spectrometry, media preparation, IT systems, building maintenance and cleaning, equipment repairs, animal services, biological, radioisotope and occupational health and safety issues, to name but a few, requires constant monitoring and planning. All of this is expensive, in fact the Institute spends three dollars for every grant acquired dollar. In this context the role of our fundraising and community relations unit is critical for our survival and many staff often are unaware of the strength of their commitment and the results they achieve, taking it perhaps, somewhat for granted.

One of the positive, almost unique, features of the Institute has always been the spirit of co-operation within the organisation. This is sustained by staff who treat each other with courtesy and respect for what they do and accord each other the dignity deserved as key parts of a successful team.

Professor Peter Rowe



Dr Wei-Qin Jiang working with cancer cells in the laboratory

## Accidental hero

CMRI scientist Wei-Qin Jiang, set out to observe the inner workings of a cancer cell and accidentally made a discovery that should lead to improved treatment for cancer. It is the first time a molecule has been discovered that switches off one of the key mechanisms that allow cancer cells to multiply unchecked.

The remarkable results were published by Dr Wei-Qin Jiang and his colleagues in the Cancer Research Unit in the prestigious journal *Molecular & Cellular Biology* in April. The team's work has received long term support from the Cancer Council NSW, as well as the CMRI's Jeans for Genes Day campaign.

"Dr Jiang wanted to track the movements of some large doughnut-shaped structures that are found in the nuclei of some cancer cells. To do this, he added a fluorescent green tag to a protein called Sp100 that is found in the doughnuts and watched their movements using a microscope. To our complete surprise, what he found was that the extra Sp100 protein switched off a key cancer cell survival mechanism," said Dr Roger Reddel, Head of Cancer Research.

One of the ways that cells become cancerous is by activating a mechanism called ALT, which was originally discovered by the CMRI cancer research team. ALT allows the cancer cells to avoid the normal barriers to unlimited cell growth, a hallmark of cancer (see page 3).

The team suspected that the doughnut structures, actually called APBs and only seen in cells that use the ALT mechanism, contributed to the ALT process, so visualising it all happening was the next step to take. Dr Reddel adds, "Tagging the Sp100 protein had a completely unanticipated, and very welcome outcome."

Dr Reddel explains, "The ALT mechanism is used by about 10% of all cancers, especially the most common form of brain tumour in adults, and osteosarcomas, which are cancers of the bone that particularly affect teenagers and young adults. Discovering how to turn off ALT is a major clue toward developing a treatment for these cancers."

*Shown inset (above) are two cells which have been induced to contain high levels of the green-tagged Sp100 protein. The extra Sp100 forms large, bright green spots in the cells.*

# An ALTERNative clue to cancer

PhD student Clare Fasching from the Cancer Research Unit has made an exciting discovery that has important implications for the future development of cancer treatments.

While studying ALT, one of the two known mechanisms that allow cancer cells to multiply unchecked, Clare found some cells using what seemed to be a third mechanism. "It is an unusual finding," said Clare "but it may provide real insight into what's going on in cancer."

The two well-known mechanisms that cancer cells use, involve telomeres, the protective caps on the ends of chromosomes. In most normal cells, telomeres get shorter as the cells multiply, like the plastic caps on the ends of shoelaces fraying. Eventually, they become so short that the cells must stop multiplying. Cancer cells get around this problem and keep their telomeres long by either using an enzyme called telomerase or a mechanism known as ALT.

"Over 85% of all human cancers use telomerase and many of the remainder use ALT," says Dr Roger Reddel, Head of the Cancer Research Unit, "If we can find a way to block both mechanisms, we think we could use this to treat most types of cancer."

So what does the discovery of a third mechanism mean for finding a definitive cancer treatment? "I think it actually means that we have a better chance of understanding the mechanisms of cancer and developing better treatments," said Clare.



Cancer researcher Clare Fasching

"The mechanism is a variation on ALT. We have only found it in one type of cancer-like cell growing in the lab, but the implications are pretty big. By finding out how it's different from ALT it will give us a glimpse into the ALT mechanism that we would never have got otherwise."

Clare's research was published in the respected international journal Cancer Research in April. An American team published a similar discovery in the same issue of the journal. "Together our findings make a really good case for the science," says Clare.

Clare has been supported by a scholarship from the Parramatta based Judith Hyam Memorial Trust Fund for Cancer Research. The Fund was established by the dedicated friends of local Councillor and Lady Mayoress, Judith Hyam, following her death from cancer in 1990. Chairman, Mr Des Kennedy said "We congratulate Clare on this exciting development in her research. We have been following Clare's research with great interest for some time now. To us she is a very modest person, but she has very wide experience in research and we knew she would do extremely well."

## A deal for better health



Mr John Lockhart, Joint  
CEO ICAP Australia (right)  
with Professor Peter Rowe

For one day, world wide, all the deals clinched at ICAP Brokers Pty Ltd are deals made for a good cause. The Company's annual charity day raises millions globally each year and CMRI was one of the handful of Australian charities selected by ICAP's Sydney office to benefit from their day of trading this year. Joint CEO, Mr John Lockhart visited CMRI in February to present Professor Rowe with a very generous cheque for \$81,750.

## Your legacy made easy

The CMRI has recently joined with CharityWills - a division of Lawsoft Pty Ltd - to help our supporters write their own will online. The CMRI has its own internet address for this service at [www.charitywills.net.au/cmri](http://www.charitywills.net.au/cmri). The site provides a simple step-by-step facility for anyone to **create and print their own will for free**, in return for leaving a bequest to the CMRI.

Bequests to the CMRI represent a significant contribution to the funding of our research programs. Since its foundation in 1959 the CMRI, unlike other research institutes, has generated the majority of its funding from the interest on capital investments. Nearly 50% of this capital fund has come from bequests with the remainder being built up through donations and the support of voluntary fundraising committees. This means that your generous bequest to CMRI, large or small, will continue working well into the future to help our scientists make a healthier world for all children.

For more information contact Stephen Ryall, Manager, Administration and Community Relations, on 02 9687 2800 or write to him at the address on the front of this newsletter.



*Ian Thorpe  
Badge \$10*



*Star Studded  
Badge \$5*



*Hologram Star  
Badge \$3*



*Jennifer Lopez's jeans,  
beautifully painted by Wendy Arnold,  
are the latest to arrive in the Jeans  
for Genes Campaign office*

# Be a star...

*Continued from page 1*

Other stars who modelled our T-shirts include actors from All Saints, MTV star Yvette Duncan and Joel Edgerton. Jeremy from Jeremyville has once again donated his fantastic graphic design skills for our designer T-shirts.

This year we have 28 fabulous retail partners, which is very exciting. They are BIG W, Just Jeans, Jeans West, Westpac, Best & Less, Gloria Jean's Coffees, MYER, The Warehouse, Terry White Chemist, Harvey Norman, Franklins, Lowes, Spend-Less Shoes, Rebel Sport, Industrie, Toys R Us, HCF, Banjo's Bakehouse, Bayswiss, Harris Scarfe, Domayne, Sizzler, General Pants, Levi's, Pharmacy Guild of Australia, Babies Galore, Glue Store and Charlie Brown. Many of these retailers are not only selling our badges but are doing activities to support us in other ways - go to [www.jeans4genes.com.au](http://www.jeans4genes.com.au) to find out more.

Our **Art Auction** this year will be held on **July 21, 2005** at the Sydney Town Hall. Chris Bath will again be Master of Ceremonies and Ray Hadley has generously agreed to be our auctioneer once more. Jean artworks this year include stars of the screen, Jane Fonda, Shirley MacLaine, Robert Downey Jr, Geoffrey Rush, Jennifer Lopez and Oscar winner Hilary Swank and that's to name just a few. The talented Jeff Duff and his band will entertain the masses throughout the night.

Other events include our **'Do it with Denim'** design competition. Fashion Design students from around Australia are busy completing their garments. The final 21 garments will be modelled at the Art Auction where the winner will be announced.

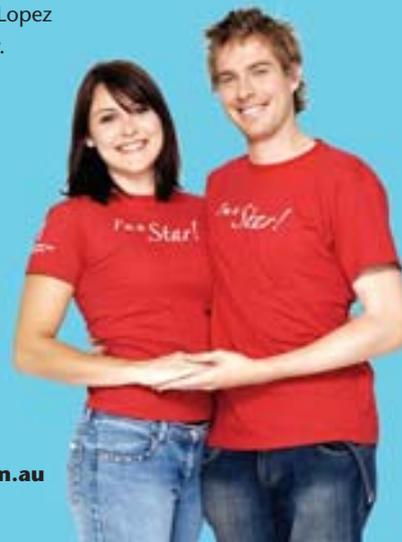
We also have our **'House of Blues'** at the Domayne store in Alexandria, NSW, where an apartment will be made up of denim homewares which will be auctioned on eBay.

For more information about Jeans for Genes please call: **1800 677 260** or visit our website [www.jeans4genes.com.au](http://www.jeans4genes.com.au)



*MTV star Yvette Duncan*

*Natalie Saleeba  
and Mark Priestley  
from All Saints*



# Brain Power



*Enoch Tay at work making  
tissue slices to view under  
the microscope*

PhD student Enoch Tay has been putting his mind to muscles but has uncovered some of the secrets of the brain in the process. His findings may lead to better understanding of the genetic condition William's syndrome. The work netted Enoch a Promega Student Prize following his presentation at the Australian Genome conference in February.

Enoch and colleagues in the Muscle Development Unit have been studying the MusTRD gene that is involved in helping muscle cells to develop correctly.

It is one of several genes missing in people with William's syndrome which causes heart abnormalities and a number

of other physical, intellectual and behavioural changes.

The team had produced a mouse that was lacking the MusTRD gene to investigate how this affected muscle development. Enoch also wanted to investigate what role the gene might play in brain development. "The mice are less fearful than normal and that mirrors some of the brain changes seen in people with William's syndrome," said Enoch. "I showed that MusTRD affects the activity of another gene involved in brain cell communication," he added. "There is more work to do but it should help us to understand what is happening in William's syndrome."

# Promina – Insuring success

CMRI is delighted to announce a new relationship with Promina Group Limited, the large insurance and financial services organisation based in Australia and New Zealand that includes AAMI and Australian Pensioners Insurers Agency. Through the Promina Foundation the Group has recently agreed to join with the CMRI in a three year alliance to assist in the vital funding of our research programs.

As a major part of the relationship Promina will be funding the appointment of a new Research Fellow, to be named The Promina Research Fellow, in our Cancer Research Group. The first recipient of this new Fellowship will be Dr Hilda Pickett who arrived from the UK in May. Dr Pickett already has

an excellent track record in cancer research including experience in the field of telomeres – the speciality of our cancer team at CMRI.

In addition to this Fellowship, Promina is looking forward to revitalising the participation of its many employees in Jeans for Genes Day. In past years, Promina (then Sun Alliance) was a major 'Genie' group and in 1996 was our top Genie raising \$13,820 from its various sites around Australia. Group Company Secretary of Promina, Mr Michael Smith said "We are excited about developing and expanding our partnership with the CMRI via our Foundation. This relationship will enable us to contribute to the better health of future generations of children in a very practical way."



Left to right; Dr Roger Reddel, Barry Williams Manager of Corporate Administration Promina presenting an initial donation of \$50,000 to Professor Peter Rowe, Director CMRI, and Mike Smith Group Company Secretary Promina



## Prevention is better than cure...

And the key to prevention lies in research. It's as simple as that!

There are over 10,000 known genetic disorders. To correct these and many other disorders research is needed to find the causes.

Here is my gift:

\$100     \$75     \$50     \$25

Other \$

Please find enclosed my cheque

Please charge my credit card:

credit card number

cardholder's name

cardholder's signature

expiry date

name

address

postcode

telephone

Please send me:

- More information about CMRI
- Christmas catalogue
- Information on my nearest fundraising committee
- An annual report
- Information on how to make a bequest
- Please update your records for my contact details

All donations are tax deductible



### I would like to join the Automatic Credit Card Donor Program

Automatic Direct Debit Amount to be donated:

\$

Please complete the Credit Card Details at left.

Frequency: Monthly  Quarterly  Other

Commencement Date:

Please complete this coupon, enclose it with your donation in the envelope provided and mail to:

Children's Medical Research Institute  
Locked Bag 23, Wentworthville NSW 2145 Australia  
Tel 02 9687 2800 Fax 02 9893 9166

Thanks for your help.



# Committee Power

## Happy 45th Birthday - Gosford

A wonderful party was held to celebrate the Gosford Committee's 45th anniversary. Dr Andrew McGeachie of the Cell Signalling Unit attended the event to tell them of the cutting-edge time-lapse microscope and computer which was purchased with funds raised by the Committee.

## Community Honours

Congratulations to Angela Williamson of the Port Hacking Committee on receiving The Cook Community Award for her charity work.

Dorothy Hanbridge of the Gerringong Committee was honoured with Kiama's Citizen of the Year award on Australia Day. Among many other achievements Dorothy initiated the annual Gerringong Quilt Show that has raised many thousands of dollars for CMRI.

## Northern Beaches Committee

Glorious weather, gorgeous fashion, supplied by annaKat of St Ives, and a delicious lunch made by the Committee, provided a memorable day for guests at Clareville overlooking beautiful Pittwater.

## Mudgee Committee

A wonderful night was enjoyed by guests at the Committee's 'Black tie and Glamorous' dinner held in April with entertainment from Sydney band 'Big Night Out'.

## Racquet Committee

An excellent turn out ensured the annual card day was an outstanding success. The Committee worked busily behind the scenes to ensure the players were beautifully fed and could enjoy a relaxing day.

## Hills Committee

Over 400 guests were entertained by the ever charming John Mangos and guest mother, Fran Macpherson, at the Mothers' Day Luncheon at Doltone House, Jones Bay Wharf, Sydney.

## 'Misrule' Doll's house

In 1994, Philippa Poole, granddaughter of author Ethel Turner, commissioned the beautiful Doll's house, 'Misrule', to commemorate 100 years of publication of *Seven Little Australians*. Philippa donated the Doll's house to CMRI. It is now on display at Cockington Green Miniature Village, Gold Creek Rd, Canberra and still helping to raise funds for CMRI.



*Clockwise from far left:*

*President Genevieve Cameron with new mum Sandra Hodge and baby Alyssa at the Parramatta Committee's Mother's Day Market in Genevieve's home;*

*Fran Macpherson, John Mangos and Hills Committee President Patti Payne at the Mothers' Day Luncheon;*

*CMRI's Erin Stalenberg (left) with Zena Stuart who nominated the CMRI to receive Blacktown RSL's regular donation to charity. Many thanks to the Club for their ongoing support;*

*Dr Andrew McGeachie cutting the Gosford Committee's 45th birthday cake with Committee Patron and Life Member Joy Noble and Past President Jenny Ross.*

## Dates for your Diary

### Gold Coast Committee

The Committee will host the Charity Performance of 'Noises Off' by the Spotlight Theatrical Company, Bundall, Gold Coast. 18 August. Tickets \$25. Contact Amanda Worley on 07 5547 6880

### Ku-ring-gai Committee

Jeans for Genes Day Luncheon with a decorated jeans competition and glamorous lingerie parade. Roseville Golf Club, Sydney. 3 August. Contact Janie Gilmour 0408 237 348

### Strathfield Committee

Parliament House Luncheon, Sydney, with guest speaker well-known philanthropist Mr Jeff Gambin. 1 June, 12 noon. Tickets \$65. Contact Nita Trollope on 0418 262 355

### Quirindi Committee

Garden Luncheon at country property 'Silsoe' at Willow Tree, NSW, with guest speaker Fiona Ogilvie, gardening writer for *The Land*. 17 September. Contact Til Symonds on 02 6747 1744

### The 'Burbs Committee

Don't miss 'The Ball in the 'Burbs' - the inaugural event of our newest Committee with the theme 'Backyard Glitz'. Epping RSL, Sydney. 27 August, 7pm. Tickets \$100. Contact Narelle Williams on 02 9872 5784

The 'Burbs Committee will host the Charity Gala Opening night of 'Annie' produced by Stagetek Academy of Performing Arts, Padstow RSL. 21 July. The Show runs 21 - 24 July. Bookings Stagetek Productions 0439 644 138

### Port Hacking Committee

Celebrate 40 years of fundraising at a spectacular dinner dance at Doltone House, Sylvania Waters, Sydney. 3 June, 7pm. Tickets \$95. Contact Libby Henry on 0418 268 046

'Denim Dance' Jeans for Genes Day celebration at Cronulla Golf Club, Sydney. 5 August, 7pm. Contact Libby Henry on 0418 268 046