



# breakthrough

GARVAN NEWSLETTER MARCH 2006/ISSUE 01



PHOTO: FRANK LINDNER

Welcome to the first issue of **breakthrough**, Garvan's new flagship magazine for supporters. **Breakthrough** reflects a number of new initiatives, which involve 'breaking through' to new audiences and showcasing our 'breakthrough' research. With the appointment of several key new staff members, this launch issue provides the opportunity for you to meet the people who will look after you. You can read about us on page 6. We look forward to your feedback.

Branwen Morgan, Editor



## News

Garvan research has been making headlines lately. Most recently, we publicised our potential new anti-inflammatory drug that has been used to prevent and treat rheumatoid arthritis in the laboratory. The importance of this discovery was highlighted

by a recent agreement with a Danish healthcare company that will enable the treatment to enter clinical trials in 2007.

In January, we revealed the discovery of a risk gene for bipolar disorder by Professor Peter Schofield's group. Clinical collaborator Professor Philip Mitchell from UNSW and Dr Ian Blair, first author on the research paper, gave an exclusive interview to Channel Nine News. There were also stories in The Australian, New Scientist, SMH, Australian Doctor and more.

We also had a story on how stress affects the immune system, making us more susceptible to bacteria and viral infections, which arose from the December publication of Julie Whewy's PhD research (see pg 3). Fronted by Associate Professors Fabienne Mackay and Herbert Herzog this research made National Television News and was extensively covered on radio, and in print.

Our press release also had international reach and was picked up by online news sites and print media in France, India, and the US amongst others!

Professor Lesley Campbell appeared on Channel Seven's Sunrise program debunking the detox diet myth. This followed on from an article in the SMH on January 12 in which she was quoted. Finally, the Sunday Telegraph ran an exclusive article on our research into the development of a test for detecting the illicit use of growth hormone in athletes, work funded by the World Anti-Doping Agency and the Federal Government.

Making other news, the Garvan Institute was named as one of Australia's 2005 "50 most beautiful exports" by First Charlton Communications and Austrade. Other winners included Collette Dinnigan, Kosta Zyu and Ripcurl.



## Opinion

One of the mysteries of life is... where does funding for medical research come from? The lag between early stage research and the realization of its benefits for consumers – more effective drugs or better diagnostic methods – can be ten years. So how do medical research institutes like Garvan stay afloat?

Typically, medical research is funded from a variety of sources, including people in the community just like you, Government (Federal and State), the corporate sector, trusts and foundations.

In Australia, getting Government funding is hard. Garvan researchers compete for National Health and Medical Research Council (NHMRC) grants. These are awarded on merit and the success rate, nationally, is only 22%.

Funding for infrastructure – buildings, equipment, operating expenses such as electricity – is another issue. For every dollar of government grant secured, we have to raise another \$0.70 to cover the direct costs of our research.

Offering competitive research salaries is also problematic, as other countries lure our best and brightest with the promise of more lavish support. The US has always been able to do this, but now countries like Singapore and China are rapidly increasing their national funding and appeal to Australian talent.

The corporate sector does support medical research, but according to Research Australia's consumer polls, not enough. Australians rate health and medical research as one of their highest priorities, and 84% of people polled want to see companies giving back to the community through funding this area.

Research Australia's polls ([www.researchaustralia.org](http://www.researchaustralia.org)) show that Australians want to see more funding directed to cancer, obesity, diabetes, and heart disease. They feel so strongly about this they're even prepared to sacrifice a tax cut.

What do you think? Whose responsibility is funding the research that will give us all better health, better futures? Email us at [foundation@garvan.org.au](mailto:foundation@garvan.org.au)

**Carole Renouf**  
Foundation Director



### Donor Profile: In memory of Pamela Edith Crawford

Thanks to the love and admiration that family, friends and colleagues bore to a very special woman by the name of Pam Crawford, Garvan research has recently benefited from our most generous in memoriam gift ever.

After ups and downs fighting the very serious illness of bladder cancer, Mrs Crawford passed away late in 2005, not long after celebrating her 50th wedding anniversary in rock and roll style with her beloved husband, Col. Pamela and Col met in kindergarten at Bondi Beach Public School in 1939; were separated by World War II; and as fate would have it, met up again eleven years later at a party back in Bondi and were married at 21.

Pamela was a Director and Company Secretary of the family motor vehicle dealership business, Col Crawford Lifestyle Cars situated in Sydney's Northern Beaches. When the business started in 1967, Pamela would do the books and banking and anything else that was required. She was a very active woman, enjoying snow and water-skiing, driving speedboats and ocean racing, playing tennis, golf, mah jong and bridge. She also found the time to support many charitable causes, including two of her own Labrador guide dogs and two young children through World Vision.

Pamela was a loving mother to Carol, Stephen and Sharyn, and a doting grandmother to Emma, Jade, Harrison, Jake and Will. During her illness large volumes of people extended their support and best wishes. The inner strength and courage she showed in her final months was typical of her character.

Garvan wishes to pay our respects to Mrs Crawford's memory, express our sadness at her family's loss, and thank all those who have contributed \$7,480 to advance research into bladder cancer.

## Quiz

1. What proportion of osteoporotic fractures occur in men?
2. In what year did the Garvan become an autonomous research institute?
3. Which leading Garvan scientist was involved in research leading to development of the breast cancer drug tamoxifen?
4. In Australia, up to one in four children show signs of asthma. True or False?
5. Which hormone, involved in diabetes, is produced by the pancreas?

Answers: 1. One in three 2. 1984 3. Professor Rob Sutherland 4. True 5. Insulin.



PhD student Julie Wheway reflects on the success of her recent scientific paper on how stress affects our immune system.

## Researcher Profile: Julie Wheway

### Q. How did you get to where you are today?

I was working as a research assistant, after completing a Science degree. I had a fascinating project studying a molecule that we know is key to development of immune diseases like arthritis and lupus. I realised then that I could enrol in a PhD and further advance my research career.

### Q. What is the most important lesson you have learnt in your career?

To really make it in science you need to collaborate and be capable of working in a team. My theory is that you can't be successful at something unless you really enjoy it.

### Q. What do you do on a day-to-day basis?

My day could involve a number of things from reviewing the latest literature, forming testable hypotheses, conducting experiments, and interpreting data. No two days are exactly the same.

### Q. What do you enjoy the most about your work?

The chance to be creative and independent and, of course, meeting fellow researchers from across the globe at great locations!

## Ask Garvan...

### Where does the name Garvan come from?

The Garvan Institute was named in memory of James Patrick Garvan (1843-1896) and family in recognition of a generous gift of 100,000 pounds by his daughter Mrs Helen Mills to the St Vincent's Hospital Centenary Appeal. James was also the founder of the life insurance industry in Australia.

### What's with the famous Garvan staircase?

The stunning spiral staircase, located in the centre of our building, represents the double helix structure of DNA, which is central to the research that we conduct at Garvan. Our staircase, designed by the famous Sydney architect Ken Woolley, has been used in a number of advertisements, most recently in a Vodafone commercial where our galleria and staircase was transformed into a nightclub!

### What type of people are Garvan researchers?

Garvan researchers are people with a passion for solving problems, and for creating a better future. Garvan has about 350 staff, and around 260 of these are researchers. Most of our researchers are women (70%), and most of them are young. The average age is 26. Between them, the members of our research community represent 30 different countries.

### How do new drugs get invented, and what role does Garvan play in that?

If Garvan scientists make an important discovery which could be used to develop a potential drug or diagnostic test, they will talk first to our Business Development Director, Christina Hardy. Christina can advise them on whether their discovery could be patented. Patenting a discovery helps to attract commercial interest. Her team will then seek to license the patented research to biotech and pharmaceutical companies who have the funds and expertise to take the basic research into clinical development. The recent announcement about the development of a potential treatment for inflammatory conditions (such as Rheumatoid Arthritis) between G2 Therapies – the company Garvan founded – and the Danish company Novo Nordisk, is a good example of this process.

If you have a question you'd like to Ask Garvan, email [foundation@garvan.org.au](mailto:foundation@garvan.org.au)

## did you know?

Did you know that prior to puberty, one out of every three children with anorexia are boys?

See our feature on anorexia on page 7



### Get involved

School, community group or workplace presentations about Garvan's work are available to you! For more information, just contact our PACE Managers on 02 9295 8108 or email [pace@garvan.org.au](mailto:pace@garvan.org.au)

"The Bannockburn Lions Club was very interested to hear about the breakthroughs in medical research that are being conducted at Garvan. The items covered in the presentation were fascinating and are relevant to us all. It opened our eyes as to

what is being achieved in our own country and what goes on quietly in the background of research, as most of us only hear snippets on the news once in a while.

It is nice to know that the future of medicine is being well looked after! As a club we felt moved to support the fantastic work of Garvan."

**Lynette Fischer, Treasurer of the Bannockburn Lions Club**



### Garvan's New 2006 Public Seminar Series

Garvan would like to invite you to our new 2006 Public Seminar Series. These seminars provide a unique opportunity to interact with leading scientists and clinicians as well as hear personal insights from people affected by common disorders. As in previous years, they will be held at Garvan but we will also be holding another series of seminars, generously sponsored by Nestlé Australia, in and around Sydney.

The in-house seminars are held in our National Australia Bank Auditorium and are sponsored by the Public Trustee (NSW). Please enter via Burton Street. There is no charge for the seminar, but bookings are essential.

- Anorexia** 5.30pm (for 6pm start) on Thursday 23rd February
- Osteoporosis & Healthy Ageing** 9am (for 10am start) on Tuesday 4th April
- Pancreatic & Prostate Cancer** 9am (for 10am start) on Thursday 8th June
- Depression & Mental Illnesses** 5.30pm (for 6pm start) on Thursday 14th September
- Type 2 Diabetes & Obesity** 9am (for 10am start) on Tuesday 24th October

Venues for the external seminars are still being confirmed, but topics and locations are:

- Nutrition and Disease** 6pm (for 6.30pm start) on Thursday 30th March (Hornsby)
- Osteoporosis & Healthy Ageing** 9am (for 10am start) on Friday 12th May (Central Coast Leagues Club, Gosford)
- Pancreatic & Prostate Cancer** Morning of Tuesday 6th June (Wollongong)
- Asthma** Evening of Thursday 13th July (Castle Hill)
- Type 2 Diabetes and Obesity** Morning of Thursday 26th October (Liverpool)

For more information about our seminars or to make a reservation, please email us at [pace@garvan.org.au](mailto:pace@garvan.org.au) or phone 02 9295 8116.



### Tour Garvan

Ever wanted to see what a state-of-the-art medical research facility is really like? Interested in finding out about the latest research into causes and treatments of some of the most common diseases that plague our society? Come on a tour of Garvan!

Take a firsthand look at the fascinating design of the building and learn about the history of Garvan. Experience what goes on in a laboratory and learn about some amazing technology that is enabling medical research to progress at a rapid rate.

Garvan is home to some of Australia's leading scientists and you will have the opportunity to meet and question some of them.

Tours start at 9.30am and run for approximately 1.5 hours. They are held on the first and third Wednesdays of every month, subject to availability. Bookings by groups or individuals are essential and can be made via email at [pace@garvan.org.au](mailto:pace@garvan.org.au) or by phoning 02 9295 8108. Tours are made available at no charge, but a gold coin donation towards morning tea would be appreciated.



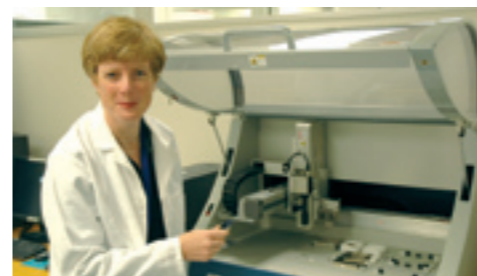
### Yoga Fundraiser

Suzi Chin of The Yoga Centre Kings Cross has been teaching Iyengar yoga to Garvan staff for over five years. In December she decided to give something back to research and donated all the proceeds from a special fundraising yoga session to the Garvan Arthritis & Immunology Program. The Yogis' raised \$125. Thank you Suzi!



### Young Business Forum Dinner

Dr Darren Saunders was a guest speaker at the Australia Israel Chamber of Commerce Young Business Forum Dinner held at the Hilton Sydney on November 10. The main speakers representing 'High Flyers' of the Online Generation' were Martin Hoffman, CEO of ninemsn; Cliff Rosenberg, MD, Yahoo! Australia & NZ; and Simon Smith, MD, eBay The YBF Charity auction, held after the dinner, raised \$9,400 for Young Garvan.



### Garvan cancer researcher recognised for her work on cancer genetics

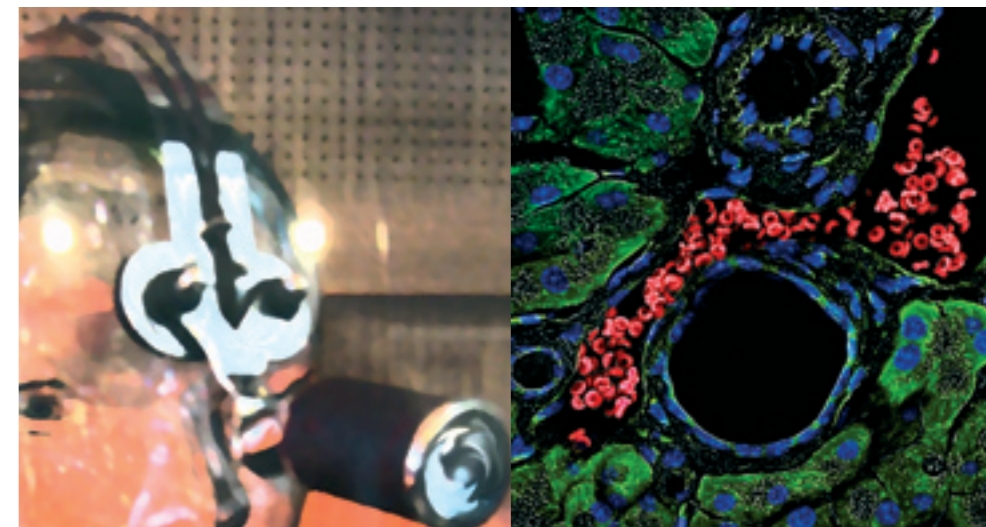
Dr Vanessa Hayes recently received support from BNP Paribas to commemorate their 125 years in Australia. Vanessa is interested in cancer genetics, in particular what gene variants predispose people to prostate cancer.



### "Hidden Treasure" Party at Ruby Rabbit nightclub

(Above) Young Garvan committee members Sally Cowan, Cassie Lapointe, Lauren Miller, and Lauren Adlam nee Sutton (L to R) at the Hidden Treasure fundraiser. (Right) Zoe Naylor from McLeod's Daughters dishes out the raffle prizes, including an Aprilia Scooter valued at over \$4000 that was won by our own Garvan scientist, Dr Rhonda Kwong.

Young Garvan's goal is to heighten awareness about medical research amongst 25-35 year old professionals, and raise funds to support a young scientist. Funds are raised through annual membership, forums, and an end-of-year party. Over \$18,000 was raised at the Hidden Treasure party on November 18.



### Science as Art Exhibition

Luke Anderson, a PhD student in the Cancer program won first prize for his photograph entitled 'Looking into the past' (Left). 'Vasculature' (Right) by Joseph Daniel won the People's Choice Award.

Winners from Garvan's 'Science as Art' exhibition, held in the Galleria, were announced at a function on September 14, 2005. Judges included NSW Art Gallery Director, Edmund Capon AM OBE; Gene Sherman, Director of Sherman Galleries in Paddington; Roslyn Oxley, Director of Roslyn Oxley 9 Gallery; and Art Consultants Sally Dan Cuthbert, Michael Whitworth, and Bill Wright.



### Donor Profile: Nestlé Australia

Just before the close of 2005, Garvan formed a new corporate partnership with Nestlé Australia. Both organisations hope this will be a long-term relationship, but have agreed to two specific foci for 2006.

On the one hand, Nestlé is sponsoring the purchase of much-needed equipment for Garvan's Human Studies Unit. Both the Pituitary Unit and the Diabetes research team have occasion to run human clinical studies, and essential equipment for these studies has been in need of replacement for some time. Nestlé is funding the purchase of a new metabolic monitor, which measures oxygen intake and carbon dioxide output to calculate resting energy expenditure; and a new glucose and lactate analyser, required for testing for insulin resistance and insulin secretion in insulin clamp studies.

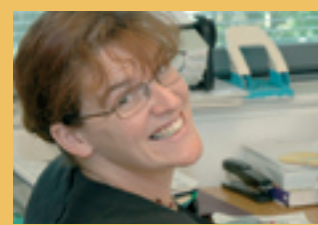
On the other hand, Nestlé is also sponsoring the development of a new public seminar series on health issues to be run outside Garvan (see page 4).

## The who's who for Garvan supporters



### Carole Renouf

Carole Renouf is the new Director of the Garvan Research Foundation, the marketing and fundraising arm of the Institute.



### Susan Sussems

Susan Sussems is the Supporter Services Manager, responsible for our banking, receipting, event bookings and acknowledgement services.



### Rachael Stewart

Rachael Stewart is the Garvan Foundation Executive Assistant and provides support across the team.



### Jerry Frenkel and Danielle Fischer

Jerry Frenkel (L), recently returned from maternity leave, and Danielle Fischer (R) are the Public Awareness & Community Education Managers. Their shared role is to take science and medical research to the community.



### Dr Branwen Morgan

Dr Branwen Morgan is the new Communications Manager. Her primary responsibility is to promote Garvan research via the media and ensure consistency and accuracy across all Garvan publications.

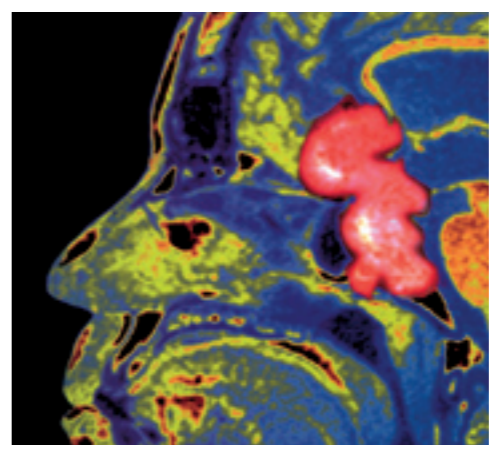
## Anorexia – the starving brain

Gregory started obsessing about his weight when he was just eight. When most boys his age would be begging their parents to take them to McDonald's, Gregory would be dreading the next mealtime. The fear of food and of gaining weight started to consume his mind. He became irritable, depressed, and began obsessing about the smallest things such as the colour of his socks. While Gregory is a fictional character, his experiences are not. They will be familiar to many who suffer from anorexia nervosa.

We now know that the body's starvation response can set in motion changes in the brain that lead to abnormal behaviour, depression and, in some cases, suicide.

Surprisingly, one in three young children with anorexia nervosa are boys. Yet, when they hit puberty something changes; the number of boys suffering from the illness decreases dramatically. The sex ratio of sufferers becomes one boy to every nine girls.

A huge worry for parents of young girls, in particular, is the possible development of an eating disorder (anorexia or bulimia nervosa). And for girls who start dieting in adolescence the risk of developing an eating disorder is twenty times higher than for those who don't diet.



**In a world where young, slim fashion models are idolized and attaining celebrity status is almost a career aspiration, the pressure to be thin is higher than ever.**

The origin of anorexia is unknown, but there is a genetic component and known environmental triggers such as traumatic events, physical, sexual, or emotional abuse.

There are different treatment strategies, the most effective of which are multifaceted and involve counselling and a structured refeeding program that exposes sufferers to the one thing they fear the most: food.

At the Garvan, scientists in the Neuroscience program have begun applying their knowledge in the field of appetite control to the question of what brain chemistry changes lead to anorexia. If we can understand where it all goes wrong, it may be possible to intervene early in the process and stop the condition developing.

Professor Herbert Herzog, who leads the weight loss & energy balance and research group, has spent the best part of his career studying a hormone called neuropeptide Y (NPY). This brain-signalling molecule has a variety of effects including helping to regulate energy balance and appetite. NPY enhances appetite and induces the feeding response, while other factors such as leptin act as a satiety factor.

Abnormalities in the neuropeptide system have been reported in people suffering from anorexia nervosa, so Herbert's team want to understand how appetite control works. They are looking at this from two opposing angles: over-eating and under-eating. Their long-term goal is to find defects in the mechanism that stimulates appetite.

Sarah McGuire, Psychologist and Eating Disorder Consultant for NSW, says that until very recently eating disorders were not recognised as a mental health problem in NSW. "We know that worldwide, there is not nearly enough research into anorexia nervosa," she said. "It's great that an outstanding research institute such as the Garvan recognises how important it is to investigate the underlying cause of this serious health issue".

The anorexia research project, led by Associate Professor Herbert Herzog and Dr Amanda Sainsbury-Salis, was initiated in 2004.

**Did you know Garvan now has nearly 40 Partners for the Future? These are the very special people who have advised they have made Garvan a beneficiary in their will. These gifts are so important, because often they enable us to take giant steps forward that we thought would have to remain dreams. Help us make that breakthrough – join us as a Partner for the Future. Just call us on (02) 9295 8110.**

## Enlist in our clinical trials

At Garvan, the knowledge we derive about our bodies comes primarily through studies of cells, tissue, and animal models. Much information is gained in this manner – however, it can only take us so far. Clinical trials are essential as they are an important source of evidence on the safety and effectiveness of health interventions. They also provide a more accurate method of understanding how things work in the human body.

From time to time, different clinical trials will come up with various prerequisites to be a volunteer. If you are interested in helping us with our research in this way, please regularly check our website ([www.garvan.org.au](http://www.garvan.org.au)) for details.

Current trials include:

**Type 2 Diabetes Project** Healthy volunteers (females between the ages of 45-55 years) with no personal or family history of diabetes.

**Anti-doping Research Project** Females who are fit and active (at least 2 exercise sessions/week) aged 18-40 years

**Pituitary Disorder Research Project** Male volunteers aged between 20-75 years with (a) Hypopituitarism (with growth hormone deficiency and testosterone deficiency) or (b) isolated Hypogonadism (only testosterone deficiency).



## Competition



To win two free sets of ten beautiful Garvan all-occasions cards and a classic Garvan black and silver pen, please submit your most creative and humorous caption for the above image by post or email by April 30.



## Be part of progress

I'm proud to be part of the Garvan community, helping to build a healthier future. Please find enclosed my tax deductible gift of:

\$50    \$75    \$100    \$200    \$500    \$1000    Other choice \$ \_\_\_\_\_

My cheque is enclosed **OR** please debit my:    Visa    Mastercard    Bankcard    Diners    Amex

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

STATE \_\_\_\_\_ POSTCODE \_\_\_\_\_

CARDNUMBER \_\_\_\_\_

CARDHOLDER'S NAME \_\_\_\_\_

EXPIRY DATE \_\_\_\_\_ TELEPHONE NUMBER \_\_\_\_\_ EMAIL ADDRESS \_\_\_\_\_

CARDHOLDER'S SIGNATURE \_\_\_\_\_

I am interested in making a bequest to Garvan. Please send me some information. **Thank you!**

Garvan Research Foundation  
384 Victoria St, Darlinghurst, NSW 2010  
Ph: (02) 9295 8110 Fax: (02) 9295 8151  
email: [foundation@garvan.org.au](mailto:foundation@garvan.org.au)  
[www.garvan.org.au](http://www.garvan.org.au)



**GARVAN  
INSTITUTE**