



# Australian research may lead to MS prevention strategy

**An Australian research team has made the important connection that could potentially lead to an effective prevention strategy against multiple sclerosis (MS) in those who may have a predisposition to this disease.**

The new findings by researchers at the University of Queensland show the connection between the virus that causes glandular fever (Epstein-Barr virus, EBV) and the development of MS.

Their research was recently published in the *Journal of Neurology, Neurosurgery and Psychiatry*, a leading British journal. It shows that for *some* people there is a defect in the immune response to EBV and this can be a contributing factor in developing MS.

**Professor Michael Pender, who leads the team, said 'Our results would support looking at prevention and treatment possibly by vaccinating against EBV to boost immunity in people susceptible to MS!'**

The team has shown that the people with MS have a decreased immune response to EBV-infected cells. 'We have observed that there is an absolute reduction in the number of immune cells (T cells) available to eliminate EBV-infected cells! This could be the reason for the accumulation of EBV-infected B cells in the brains of people with MS.

The research used 34 samples from people with MS and 34 samples from people without MS, and they applied an innovative approach to measure immunity by exploiting physiological mechanisms present in each individual.

'We also found that the more severe the decrease in immunity to EBV, the younger the age of onset of MS. This suggests that the more severe the defect in EBV immunity, the sooner MS will develop after infection with EBV in selected people.'

Dr Bill Carroll, Scientific Chairman of MS Research Australia, said the research is exciting as it begins to unravel the links between genetics, viruses and MS. This



► PROF PENDER AND RESEARCH OFFICER PETER CSURHES IN THE LABORATORY WITH A FLOW CYTOMETER SHOWING ANALYSIS OF LYMPHOCYTES FROM THE BLOOD OF A SUBJECT IN THE STUDY.

work was supported by project grants from MSRA and Biogen Idec Australia.

This work still leaves a fundamental question for Prof Pender to work out whether the decreased number of EBV-specific immune cells is the cause or the effect of the accumulation of EBV-infected B cells in the brains of people with MS. He believes that the decreased immune response to EBV may be causative because small changes in sensitive dynamic pathways such as in the immune control of EBV can, over time, produce dramatic changes – sometimes referred to as the 'butterfly effect'.

MS is an autoimmune disease but the primary cause remains unknown. Epidemiological studies indicate that infection with EBV has a role in the development of MS. EBV has the unique ability to infect, activate and silently persist in certain immune cells called B cells. 'Our aim is to determine if a genetic defect in the elimination of EBV-infected B cells by immune T cells might influence the development of MS,' says Prof Pender.

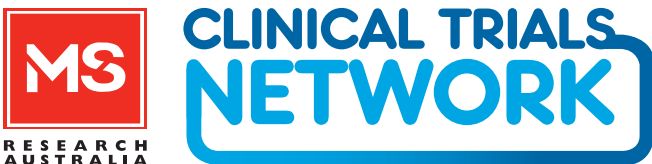
## New drugs show great promise against MS symptoms

**Researchers at the University of Cambridge have shown that the drug alemtuzumab reduces relapses in MS and helps the brain repair itself. It is one of a series of promising treatments currently in the pipeline.**

'The results from the alemtuzumab clinical trial are very encouraging,' acknowledges Dr Bill Carroll, Scientific Chairman of MSRA.

The study found that alemtuzumab (also known as Campath) was able to reduce relapses in people with relapsing remitting MS by 70 – 80% over existing interferon beta-1a medications. 'We have never seen such widespread disease suppression and measurable reverse of disability,' said Dr Carroll.

Further data is now necessary to confirm its ability to stabilise disease activity and facilitate brain repair. Developing new remedies is an enduring process. As MS is unpredictable and varies greatly between individuals, larger trials over a longer period of time are needed to measure 'treatment effects'.



**Clinical trials are an important instrument to stringently test the safety and efficacy of a potential treatment before a company is allowed to sell it.**

MSRA has established the MSRA Clinical Trials Network (MSRACTN) to attract international clinical trials by coordinating information amongst the key stakeholders: health professionals, trial sponsors and people with MS. The network will also provide significant help to turn Australian and New Zealand ideas into home-grown clinical trials.

Making Australia more attractive for clinical trials is important. The Network will increase the number of trials coming to Australia and will make it easier for more people with MS and their neurologists to take part in the trials. In particular, there is a great need to conduct clinical trials for progressive MS, and for these trials to be run in Australia and New Zealand. Although not all trials are successful, even the unsuccessful ones help us to understand the causes of MS better.

**The MSRA Clinical Trials Network is set to be the first point of call for anyone interested in MS clinical trials in Australia and New Zealand.**

Joining the Network is free and information is readily available on the MSRACTN website. The MSRACTN database currently includes a variety of different trials including the treatments for MS and related symptoms including incontinence and fatigue.

Visit the website for more details [www.mstrials.org.au](http://www.mstrials.org.au)

Dear MSRA Brain Bank Supporter,

Since its launch in February 2008 the MSRA Brain Bank has seen the amount of available tissue for MS research triple from four to twelve brains and we will soon be in a position to provide tissue for scientists. I would like to thank the families of current donors for their assistance. The contributions of our donors have the potential to unravel the causes of MS and progress us towards an ultimate cure.

We'll be using this newsletter and our website to address some of the issues and myths surrounding tissue donation. There will also be an opportunity for you to provide us with feedback.

The MSRA Brain Bank is striving to be the best brain bank in the world by collecting tissue quickly after death. This ensures that breakdown of the tissue is minimised, maximising the number of experiments for which it can be used.

To date, although 555 people have registered to donate tissue for MS research which is fantastic, only 178 completed consent forms have been returned. We do need these completed forms as soon as possible.

**Best wishes for 2009,  
Prof Simon Hawke, Director, MSRA Brain Bank**



## Vale Ian Ballard – F5m founder, friend and hero

**Ian Ballard thought it was a simple equation: if 2,000 people with MS could each raise \$2,500, then they could be a powerful force with \$5 million in their pockets to start directing MS research projects.**

The power of this idea drove him to establish Foundation 5 Million or F5m in 2005, an organisation dedicated to fundraising and having fun along the way. His mission was clear: direct the money to where it is most likely to find a cure so that future generations won't ever have to experience MS.

To date more than 200 people have held F5m events honouring this goal.

Ian Ballard passed away in mid-October from a heart attack, aged 48, after living with MS for 16 years. Although he didn't live to see the Foundation reach the \$5 million mark, he did see something else form: a close-knit family of People with MS who were there to support one another during tough times, and celebrate in others.

Ian realised that F5m gave People with MS a real sense of empowerment: 'It puts a whole different emphasis on fundraising. You feel part of the global fight against MS. And it's great that many people who live with the disease remain capable and continue to make an active contribution to today's community as well as tomorrow's health.'

Ian Ballard's enthusiasm, encouragement and determination cannot be replaced, and no one could fill the gap that his passing has left. But his spirit will continue as will F5m, continuing to make a difference today and for future generations.

## Two Million Down, Only Three Million To Go

**The sad news of the passing of F5m founder Ian Ballard was all the more poignant with the news the Foundation has recently passed its second million-dollar milestone.**

With \$2.2 million, F5m has evolved from a simple idea to a fundraising tour de force, as People with MS and their friends and families aim to fund research that will lead to a cure.

The commitment has been overwhelming, with hundreds of people hosting events across the nation. Donations have ranged from just a few dollars, while Ian Ballard's aunt bequeathed her entire estate (over \$200,000).

The fundraising message of F5m is two-fold: all donations, big and small, are welcome. Ian always pointed out that many small donations equal one large amount. The second point is to have fun whilst fundraising, as he would say, 'Partying is good for you!'



▶ VALE IAN BALLARD.

## Cycling to continue the F5m dream

**Motivated by their dedication to continue Ian Ballard's dream, a team of 15 cyclists – team KHS77 (mainly comprising old Ku-ring-gai High school friends). They rode 90km from Sydney to the Gong, raising over \$40,000.**

### Coming up

The '**MS Latin Spectacular**' 28 March 2009, will showcase some of Sydney's most vibrant and entertaining Latin American performers at Club Marconi, Bosley Park. Tickets are \$80 each for a three-course meal, drinks and entertainment. For more information on tickets or sponsorship contact Claudia 0407 300 222 or [msslainspectacular@hotmail.com](mailto:msslainspectacular@hotmail.com)

**Virtual English Channel Swim** – Lesley Christen is recruiting people with MS to join her relay team at The Sydney University Sports and Aquatic Centre to swim the virtual distance of the English Channel, 35km. A great way to fundraise and also great for your health. For further details call 02 9468 8390.

# Sound financial assistance

## Financial advice is good; financial assistance, even better.

And that's exactly what the Association of Financial Advisors (AFA) has provided to MS Research Australia. In the two short years in which it has partnered with MSRA, members of the AFA have contributed over \$200,000 – a fabulous result and one that shows how seriously the Association takes its social responsibility.

The partnership started at the group's national conference in Sydney just two years back when delegates were introduced to Stephen Papadopoulos, a young man with MS. They heard about life with the disease and the daily injections he has to endure. They also heard from Professor Graeme Stewart, one of Australia's leading immunologists about scientific advances in the field.

The relationship is strong, with MSRA keeping them in the loop about research efforts and how AFA donations are being spent and what developments are underway.

The \$200,000 raised so far will accelerate MS research. The Association funds the AFA Research Scholarship provided to Scott Kolbe and the AFA Research Fellowship at the new national MS Brain Bank facility at the University of Sydney.

# Further \$1.6 million of new research projects for 2009

**MSRA will fund eleven new project grants starting in 2009.** 'We are very pleased to have boosted the amount of funding available for research projects from \$950,000 to over \$1.6m,' said MSRA's Executive Director, Mr Jeremy Wright.

The following list is a snapshot of the new research to commence in 2009.

### Project Grants

- Dr Judith Greer (University of Queensland) – Developing targeted treatments.
- Prof Vicki Anderson (University of Melbourne) – Studying the impact of childhood MS.
- Dr Rhonda Brown (University of New England) – Examining factors that account for early departure from employment.
- Dr Michael Barnett (University of Sydney) – Discovering and characterising potential molecules important to the cause of MS.
- Dr Tobias Merson (Howard Florey Institute) – Identifying the changes occurring at the early stages of MS.
- Dr Alison Jennings (University of WA) – Understanding why the neural repair process fails in the later stage of MS.
- Dr Simon Murray (University of Melbourne) – Taking a genetic approach to analyse the brain repair process.
- Dr Pamela McCombe (Royal Brisbane and Women's Hospital) – Studying the changes before and after pregnancy.

### Fellowships

- Dr Judith Field (Howard Florey Institute) – How do genetic changes in people with MS lead to the development of disease?

### Scholarships

- Laura Gianni (University of Melbourne) – Scanning for MS-specific molecular biomarkers.
- Jason McKenzie (Griffith University) – Targetted scanning for MS-specific genes.

For more detail visit the MSRA Website: [www.msra.org.au](http://www.msra.org.au)

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## MSRA Partners

## Yes, I want to help MS Research Australia

My tax deductible donation is \$ \_\_\_\_\_

Please debit my:  Visa Card  Mastercard  Amex

Card No: \_\_\_\_\_ Exp: \_\_\_\_/\_\_\_\_

Signature: \_\_\_\_\_

OR I have enclosed my: Cheque/Money Order payable to MS Research Australia.

I want to support MS Research Australia on an ongoing basis, please charge \$ \_\_\_\_\_ to my credit card per month until notified.



**To donate now go to [www.msra.org.au](http://www.msra.org.au)**

**Donations over \$2 are tax deductible**

Title: \_\_\_\_\_ First Name: \_\_\_\_\_ Surname: \_\_\_\_\_

Address: \_\_\_\_\_

Postcode: \_\_\_\_\_

Telephone (W): \_\_\_\_\_ (H): \_\_\_\_\_

Email: \_\_\_\_\_  Please send me information on how I may support MSRA in my Will.