



# insight



PHI NEWSLETTER, AUTUMN 2005



## Prince Henry's presents new logo - Science for better life

### Director's Message



Dear friends,  
In this special June fundraising issue of Insight we present to all our friends and supporters our new logo - Science for Better Life. This new image reflects the expertise of our scientists and the vital research conducted at the Institute.

Research in this issue includes our work with the World Health Organization to find a contraceptive that also reduces HIV infection. One of our young scientists was selected for a highly competitive neuroscience training program.

Please help us continue excellent scientific research for better life, by giving generously for our June appeal.

Professor Evan Simpson

Prince Henry's Institute maintains a reputation as a world leader in hormone and reproductive research

Our mission is to improve quality of life through the investigation of hormones in reproductive health, cancer, diabetes, obesity and cardiovascular disease.

A long term goal of the Institute has been to develop a fresh new image to better represent our critical field of research and our vision to improve human health overall.

We are proud to present to our supporters Science for Better Life.

This new logo will help to raise the public profile of the Institute both nationally and internationally.

We have been extremely fortunate to have the assistance of advertising agency Tribal DDB to develop the image and logo. We would like to thank Creative Director, Heath Rudduck for the logo design and also Director,

David Pisker, for both their combined expertise and guidance. Members of the Institute Development Board, Institute staff and friends have contributed greatly to this process.

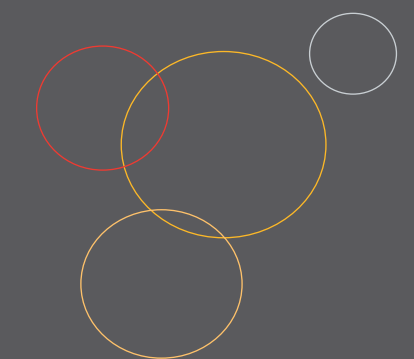
We hope that all our supporters will embrace the new image and continue to support us as they have in the past.

For more information about the Institute and our research visit [www.phimr.monash.edu.au](http://www.phimr.monash.edu.au)

Dr Rebecca Jones, Senior Research Officer



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# PHI scientist selected for prestigious neuroscience program

Dr Wah Chin Boon of Prince Henry's Institute was one of only 12 scientists selected from Australia and New Zealand to attend the inaugural Australian Advanced Neurosciences Research Initiative, in Queensland in April 2005.

The first of its kind in Australia, the program's aim was to train outstanding young neuroscientists in brain research technology.

The program emulated two distinguished neuroscience research and training programs in the US - the Woods Hole and Cold Spring Harbour programs.

The Initiative was founded by two eminent Australian neuroscientists, Professor Steve Redman from the Australian National University and Dr Alan Finkel, of the Finkel Foundation.

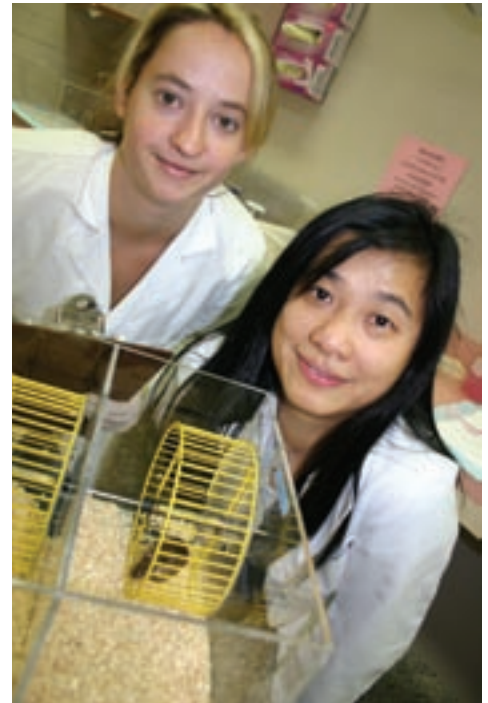
The intensive training program gave Dr Boon an invaluable opportunity to work with other leading Australian and overseas scientists to develop skills in new disciplines and experimental techniques, and forge relationships with potential collaborators for future research projects.

Dr Boon learnt a technique known as 'patch clamping', which will have significant applications in her research on the effects of oestrogen in the brain in conditions such as Alzheimer's disease and the menopause.

'Patch clamping' enables scientists to measure the current flowing through neurons in the brain and study whether they can be modified by drugs or hormones.

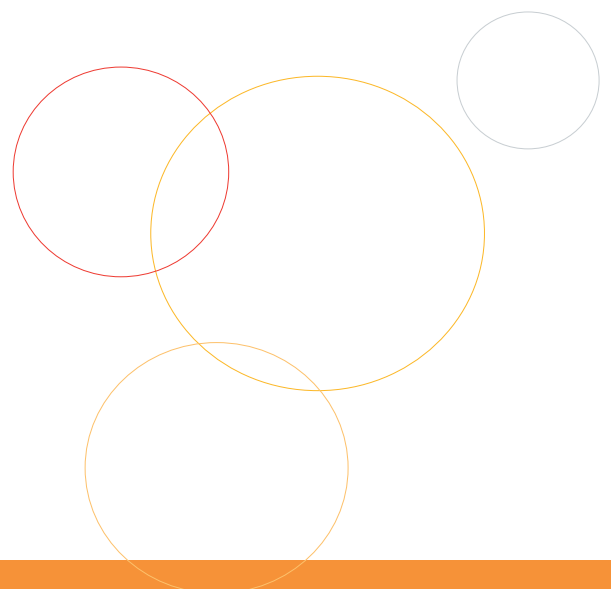
"By applying this technique in the ArKO mouse, we hope to better understand the role of oestrogen in memory formation and loss." Dr Boon said.

Dr Boon wishes to thank the Monash Centre for Brain and Behaviour and Prince Henry's Institute for co-funding her participation in the course.



*Dr Wah Chin Boon (right), selected for an prestigious neuroscience program, with her student Rachel Hill and the ArKO mouse*

"This was an invaluable opportunity to work with other leading Australian and overseas scientists in my field" - Dr Wah Chin Boon



# New female contraceptive may also reduce HIV

Scientists at Prince Henry's Institute have discovered a target for a female contraceptive that may also reduce HIV infection.

The World Health Organization estimates that women account for almost half of all newly infected adults of HIV.

"This research discovery has significant implications for improving women's health in countries where HIV is at epidemic proportions," said Dr Guiying Nie, the senior scientist involved in the study.

HIV is a sexually transmitted disease and is interconnected with unwanted pregnancies in heterosexual couples. Currently, there is no effective female contraceptive that protects against HIV infection.

Hence there is an urgent need to develop a contraceptive that will have a dual role for women.

For the past five years, scientists at PHI have been part of an International WHO-Rockefeller Initiative searching for molecules that are essential for implantation and thus provide targets for contraception.

The research discovery shows that the molecule PC6 (proprotein convertase 6) is a significant target for embryo implantation in mice.

The "proof of principle" established that when the molecule is blocked in the mouse uterus, implantation is prevented. Importantly, the same molecule has been linked with HIV infection.



*Dr Guiying Nie investigates research into a new female contraceptive that may also block HIV infection.*

"To develop a unique female contraceptive that has a dual role will improve the reproductive health of millions of women around the world", said Dr Nie.

The team is now working with a pharmaceutical company to develop the research further.

The latest research was published in the April 2005 issue of **Biology of Reproduction** a top-ranked scientific journal in the field of reproduction.

PHI is one of only two Institutes in Australia that is a WHO Collaborating Centre for Research in Human Reproduction.

PHI is researching a unique female contraceptive with a dual role

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# New Zealand supporters of ovarian cancer research visit PHI

New Zealand members of the **Granulosa Cell Tumor of the Ovary Foundation** were given a special tour of Prince Henry's Institute in April 2005.

The Granulosa Cell Tumor of the Ovary Foundation works to raise funds specifically for granulosa cell tumor research, to increase awareness of this ovarian cancer, and provide hope and support for survivors.

Granulosa cell tumours represent 5-10 per cent of all ovarian cancers. The tumours have a unique behaviour and therefore require a specific approach of study.

Scientists at PHI are working to identify genes within the tumours, whose abnormal behaviour results either in growth stimulation of the tumour or loss of growth control.

Mrs Sladjana Crosley, a survivor of granulosa cell cancer, and her husband Powell Crosley, recently established the New Zealand arm of the San Diego based Foundation. As Managing Director of the New Zealand division, Mrs Crosley hopes to extend the efforts of the Foundation to cover Australasia.

Acknowledged as world leaders in the molecular characterisation of these tumours, PHI is fortunate to have been the sole recipient of their fundraising efforts since the Foundation began in 2003.

"We are very grateful for the support and recognition received from the Foundation and welcome Mr and Mrs Crosley to the Institute," said Professor Peter Fuller, Head of the Endocrine Genetics Group at the Institute.

Scientists hope that continued research will improve the outcome for women afflicted with this cancer.

For more information about the Foundation visit [www.gctf.org](http://www.gctf.org)



*Dr Simon Chu is a member of the scientific team researching treatments for ovarian cancer.*



*Professor Peter Fuller and Dr Simon Chu welcome Mrs Sladjana Crosley and Powell Crosley (centred) to tour the ovarian cancer research facilities at the Institute.*

## Volunteers needed for Implanon research trial

Women using the contraceptive Implanon are needed to participate in stage two of research trials.

Prince Henry's Institute is part of an all Australian research consortium to help find a solution for a troublesome side effect of the popular sub dermal implant contraceptive, Implanon.

Implanon is a very effective long acting and easily reversible contraceptive. It is a matchstick sized implant that is inserted under the skin of the inner aspect of the arm. It administers a low dose of a

progesterone type hormone, which effectively prevents ovulation for 3 years.

It is estimated that 25% of Implanon users experience frequent or prolonged episodes of bleeding and two thirds of these women discontinue use in the first year due to the disturbance.

Volunteers are needed to trial the effectiveness of treatments in regulating this problem.

The Institute's role in this trial is to understand what happens at a molecular level in the human endometrium, with the use of the various treatments.

Women wanting to take part in the Implanon trial should contact Corry Garamszegi, Research Nurse, The Royal Women's Hospital - 0419 148 001 or the Women's Health Information Centre - 03 9344 2007

For more information about the trial, visit 'Services for Women' on the RWH Well Women's website - <http://www.rwh.org.au/wellwomens>