



insight

PRINCE HENRY'S INSTITUTE OF MEDICAL RESEARCH Newsletter Summer 2003

Director's message



Welcome to the Christmas issue of *Insight*. I would like to extend a heartfelt thanks to all our donors for their continued support and to wish everyone Seasons Greetings and a happy New Year.

Evan Simpson

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Laser technology - A boost for ovarian cancer research

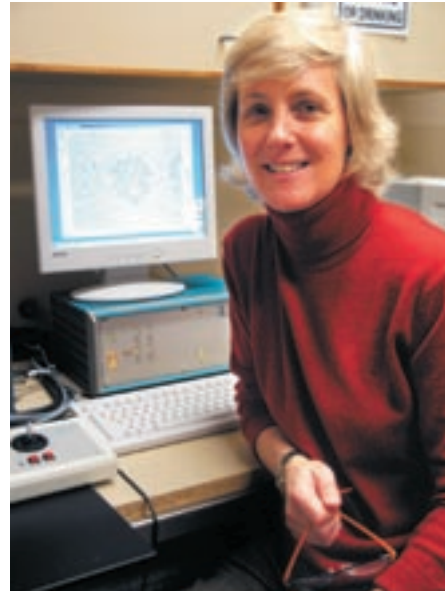
One of only six in Australia, a Palm laser dissection microscope has been installed at Prince Henry's Institute. It is the only microscope of its kind in Australia to be used for ovarian cancer research.

The microscope uses a technique called laser pressure catapulting – using the force of light to lift up samples of a cell into a sterile tube for analysis.

This means researchers can isolate single or groups of cells from a wide variety of animal and human tissue samples.

“This cutting edge technology is an enormous advance for our institute. There is no limitation in the way this machine can be used to understand normal and diseased states,” said Professor Evan Simpson, Director of Prince Henry's Institute.

“In regards to ovarian cancer, the Palm laser dissection microscope will allow us to look at the tumour cells and the interaction between the cancer and the surrounding tissue,” said Dr Jane McNeilage, researcher and clinician of the Ovarian Cancer Research Foundation, who is based at Prince Henry's Institute.



Dr Jane McNeilage with the new Palm laser dissection microscope and analysis system.

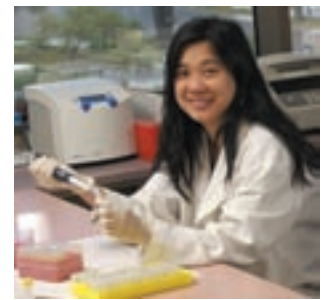
“This will help us to define important genes that may be potential targets for an early detection test for ovarian cancer,” Dr McNeilage said.

The microscope was purchased with support from the Ovarian Cancer Research Foundation, from funds raised via their silver ribbon campaign.

For more information about the silver ribbon campaign (Sept 1 – 6) visit www.ocrf.com.au

Is Aspirin the future for breast cancer treatment?

Drugs as simple as Aspirin and Ibuprofen could become future treatments for breast cancer,



Breast Cancer research staff: Above right: Dr Wah Chin Boon; Above: Professor Evan Simpson, PhD student Agnes

Current research shows that Aspirin and Ibuprofen reduce the production of Prostaglandins and hence the risk of breast cancer.

Scientists at Prince Henry's Institute of Medical Research have discovered that the body's own Prostaglandins stimulate aromatase production in the breast and hence contribute to the development of breast cancer.

This research is important as it provides the rationale behind trials of Aspirin and Ibuprofen which have shown a reduction in the risk of breast cancer.

The latest study of 800,000 women by the USA Women's Health Initiative showed those who took Aspirin experienced a 22 per cent risk reduction and those who took Ibuprofen had a 49 per cent risk reduction in developing the disease.

Prince Henry's Institute is the only group in Australia pursuing this concept for the treatment of breast cancer.

The Institute is currently collaborating with a group at Duke University in the USA in an initial testing program that we hope will have some positive results.

Research Discovery - growth hormones linked to the heart

Research at Prince Henry's Institute shows that a growth hormone releasing compound, essential for human development, could become a treatment for heart disease.

In children, growth hormones stimulate growth. In adults it maintains balance in energy, weight and metabolism.

In the aged, however, levels of growth hormones are in decline and can be the cause of many health problems such as increased fat, reduced brain capacity, muscle mass and heart function.

Research led by Dr Chen Chen at Prince Henry's Institute, in collaboration with Chinese Academy of Medical Sciences, shows a direct link for growth hormone-releasing compounds in assisting the heart muscle cells to function.

"This research shows that growth hormone releasing compounds have a direct impact on facilitating both cardiac contraction and relaxation, essential elements in helping the heart to function," Dr Chen said.

"This new discovery could be useful in the treatment of heart

failure, one of Australia's largest health problems," he said.

This paper was published in the journal *Endocrinology*.



Dr Chen and student, Kirk Truong

Improved contraceptive choices for couples

For over 40 years Prince Henry's Institute has focused on improving contraceptive choices for couples worldwide.

As a World Health Organization, collaborating centre for reproductive health, Prince Henry's Institute takes the view that providing safe and effective choices of contraception are essential.

This is particularly so in those developing countries where health services are lacking. It is also important to meet the various contraceptive needs of men and women throughout their reproductive lives.

World first male contraceptive trial

Results of a world first Australian trial of a male hormonal contraceptive successfully reported no pregnancies over 12 months.

Fifty-five Australian couples were given a combination of testosterone and progestin injections and implants, every three to four months.

"This is the first time a reversible male contraceptive that suppresses sperm production has been fully tested by couples," said Principal Investigator, Professor David Handelsman of the ANZAC Research Institute.

Victorian participants in the trial, Mark and Andrea who already have two children, said they couldn't wait for the contraceptive to be on the market.

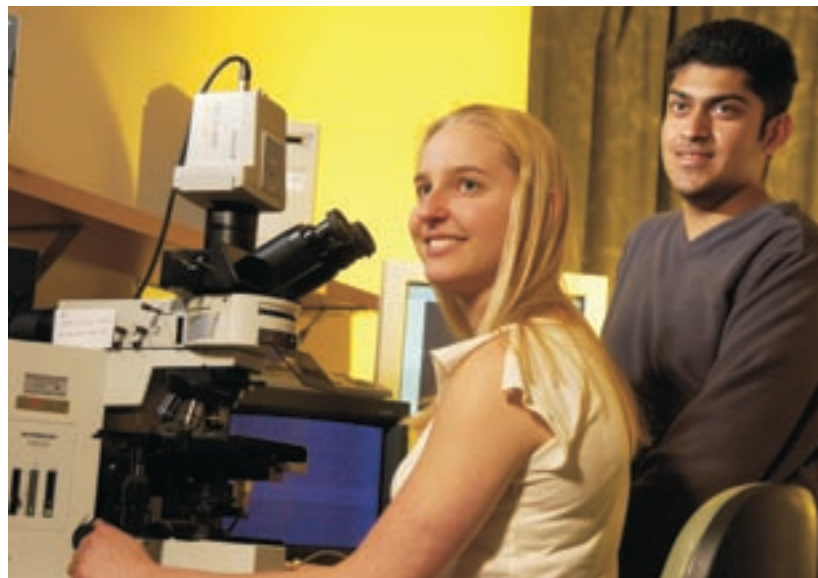
"It was great not to have to take a pill every day," said Andrea.

"When couples are at different stages of their reproductive lives – their needs differ," said Assoc. Professor Rob McLachlan from Prince Henry's Institute.

"This is designed for couples in stable relationships where they negotiate their contraceptive needs and their desire for family and timing of children," said Assoc. Professor McLachlan.

"It is now over to the companies to develop a convenient and acceptable product. We have proved that it is possible for them to do it," he said.

For more information visit research news at www.phimr.monash.edu.au



*Male Reproductive Biology students:
Amanda Beardsley, Yogeshwar Makanji*

Prince Henry's receives USA grant to study Implanon

Prince Henry's Institute is part of an all-Australian research consortium to share a grant of US \$1.3 million from the prestigious National Institutes of Health USA, to study the long acting contraceptive Implanon.

"It's fantastic that Australian scientists have received this prestigious grant to improve the acceptability of long-acting contraceptives, not just for Australian women, but for women worldwide," said Professor Jock Findlay, Deputy Director of Prince Henry's Institute.

Since its introduction in 2001, over 160,000 Australian women have started using Implanon. Implanon is a small rod, which inserted in the upper arm, administers a low dose hormone that prevents ovulation for three years.

Although Implanon is over 99 percent effective, there are still some minor elements of the contraceptive that need improving.

Victorian participants are needed.

Users of Implanon please contact research nurse Ms Corry Garamszegi at the Royal Women's Hospital in Melbourne on mobile: 0419 148 001



Above: Natalie Hannan researches endometrial tissue with the Uterine Biology group.



from all at Prince Henry's Institute, and have a safe, happy New Year

Further Information

For further information about articles in this edition of *Insight* call Rebecca Scott (03) 9594 4391 or email rebecca.scott@phimr.monash.edu.au

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