



RESEARCH REPORT '07



the women's
the royal women's hospital
victoria australia



The Research Report provides information about research undertaken at the Women's, opportunities for research training and how the research relates to clinical practice.



The Clinical Report provides information for peer hospitals and professional groups on clinical activities at the Women's and is written to encourage critical reflection, accountability and peer commentary on our clinical performance.



The Quality of Care Report provides information for the public about the quality and safety of clinical care, how we compare with other hospitals and how we seek to improve care.

WELCOME TO RESEARCH AT THE WOMEN'S

Welcome to our first integrated Research Report (2007). This report describes the 2006 research activities of the Royal Women's Hospital, Melbourne, Australia.

At the Women's we have embraced research as an integral part of the hospital's mission and vision, and facilitated a unique pathway for the future of women's health research and service delivery.

We have achieved this through strengthening our leadership, education and advocacy roles and by working hard to achieve the best outcomes for women and their babies requiring specialist care.

As a tertiary level hospital we are committed to excellence and innovation. The range of research currently being performed at the Women's is multi-disciplinary, and extends to all levels of our hospital and into the community.

Our research goals include fostering an environment and creating a culture amongst our staff that is conducive to a vibrant and collaborative world class research program.

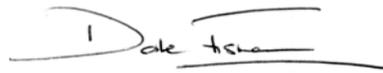
Our dedication to research has resulted in a distinguished record and an outstanding international reputation for producing such remarkable outcomes as:

- delivering Australia's first IVF baby (the third in the world), and publishing the world's first full report on the procedure;
- facilitating the birth of the world's earliest born surviving quadruplets;
- establishing a link between oxygen levels in humidicribs and retrolental fibroplasia (a cause of blindness in premature babies);
- investigation and treatment of severe infection in women after childbirth; called puerperal sepsis;
- investigation and treatment of gynaecological cancers;
- establishing gentler ways of assisting breathing in tiny babies immediately after birth and in newborn intensive care;
- providing one of the world's longest-running follow-up programs for very premature babies; and
- leading clinical trials and advancing investigations internationally into the effectiveness of the human papilloma virus vaccine.

At the Women's, we recognise the importance of partnerships and the role they play in ensuring the ongoing discovery of preventions and treatments for health problems affecting women and newborn babies.

In June 2008, the Women's Research Centre will move to our new state-of-the-art facility in Parkville. Being located in a precinct with some of our strategic partners will allow us all to leverage the skills and experience of some of the world's best researchers.

This unique opportunity will enhance the capacity of the Women's to achieve great success in its future research endeavours as we continue to work hard to improve the health and wellbeing of all women and new born babies.



Dale Fisher
Chief Executive

‘Our dedication to research has resulted in a distinguished record and an outstanding international reputation...’

Welcome to research at the Women's

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OVERVIEW FROM THE RESEARCH OFFICE

The Royal Women's Hospital has a proud history of research over the one hundred and fifty years of its existence. The current care we provide our patients has arisen largely from the results of past research studies, not only at the Women's, but also from around the world.

However, to improve health outcomes further for women and babies, more research studies are needed now and into the future, particularly at teaching hospitals like the Women's. These research studies will involve not only direct clinical care but also laboratory research. When surveyed most patients like the thought that they are cared for in a hospital that has an active research program.

The merit of research studies is supervised by the hospital's Research Committee and the rights of individuals are protected by the hospital's Ethics Committee.

Funding for research is a continual battle. The research in this report provides a foundation for future growth in clinical and laboratory research relevant to women and babies.

It is a pleasure to present the Research Report for the Royal Women's Hospital for the calendar year 2006. It would not have been possible without the support and co-operation of all members of the hospital's staff. The report highlights the major areas of research within the hospital, with more detailed information on grants, students, and publications obtainable towards the end of the report.



Professor Jock Findlay
Director, Research



Professor Lex Doyle
Head, Clinical Research Development





REPORTS
FROM
RESEARCH
GROUPS

GYNAECOLOGY ASSESSMENT CLINIC

The predominant research area for 2006 for the Women's Gynaecology Assessment Clinic was an observational research project evaluating Nurse Practitioner assessment of abnormal vaginal bleeding.

The research was undertaken in consultation with Murdoch Childrens Research Institute Clinical Epidemiologist, Dr Susan Donath, and comprised several phases. Phase 1 benchmarked the existing Clinical Practice Guideline against the AGREE Collaboration, Appraisal of Guidelines for Research and Evaluation. Phase 2 evaluated the applicability of the existing Nurse Practitioner Clinical Practice Guideline in clinical practice and Phase 3 evaluated Nurse Practitioner clinical skills in the Gynaecology Assessment Clinic. Phase 2 & 3 both incorporated a number of audit tools including a clinical audit of patient records and medical, ultrasound and patient questionnaires.

Findings from this research are currently being translated into clinical practice in the Gynaecology Assessment Clinic through collaborative review of the Nurse Practitioner Clinical Practice Guideline.

During 2006 this research was presented at a number of conferences.

Nurse Practitioner Catherine Watson identified recurrent vulvovaginal candidiasis as an area lacking in randomised controlled trials to support evidence based clinical management, and that women are often given inconsistent advice. As a part of her studies for a Master of Nursing Science degree at UniSA, and under the supervision of Dr Helen Calabretto, Ms Watson prepared the manuscript for publication, produced a patient information booklet and developed a generic clinical practice guideline for nurse practitioners. The patient information booklet, "Not that Itch Again" was published by the Women's in August 2007 and has received resounding endorsement by both consumers and clinicians.

Ms Watson has also presented her work at a number of professional forums including the Australian Nurse Practitioners' Conference in October 2006. Importantly, it is envisaged that her findings will inform the developing role of the Nurse Practitioner in the Vulva Disorders Clinic at the Women's.



HUMAN REPRODUCTIVE BIOLOGY

The Women's provides reproductive services in collaboration with Melbourne IVF.

Female reproductive biology

Integration of fundamental research and clinical application is the hallmark of scientific research in the area of human reproductive biology at the Women's Reproductive Services and Melbourne IVF. One focus in the *in vitro* fertilisation (IVF) laboratories has been on identifying the embryonic factors associated with successful implantation. The knowledge we have gained from careful observations on early stages of development has led to improved selection of the embryo which is most likely to implant. This, in turn, has helped facilitate the move towards transferring only single embryos in many cases.

A consequence of the above trend is that we now find ourselves in a position where we cryopreserve approximately twice as many embryos as we transfer fresh. Analysis of the factors associated with successful embryo cryopreservation has long been a major interest in our laboratories and much of our published work is in this area.

Our interest in and close identification with cryopreservation in reproductive medicine is also reflected in the work of Dr Debra Gook, who carried out much of the pioneering work in oocyte cryopreservation. This work continues and our first births from this approach have recently been confirmed. Work in this area also includes the cryopreservation of ovarian tissue as

Finally, the legislative changes which have allowed carefully regulated research on human IVF embryos which are no longer required for treatment purposes led to a collaborative project involving Melbourne IVF and a prominent stem cell group, Stem Cell Sciences. This work, which is still ongoing, has led in turn to the derivation of the first human embryonic stem cell lines in Victoria.

Male reproductive biology

Male factors contribute to infertility as much as do female factors. We have for many years been investigating how sperm interact with oocytes, how sperm function, the variables that affect semen quality, how to automate semen analysis, the causes and management of male infertility, and the outcomes for both women and their children after assisted reproductive techniques. We have also been involved in many clinical trials of different reproductive techniques.

Defects of sperm-oocyte interaction account for about 25% of patients with infertility of unknown causes. If diagnosed before IVF is attempted, patients with defects of sperm-oocyte interaction would be treated by ICSI and avoid an IVF cycle with low or zero fertilisation. In the future, simpler alternative tests of sperm functional capacity that correlate with sperm-oocyte interaction will be developed that should assist in the prognosis for natural conception of couples with mild abnormalities of semen analysis.

‘Work in this area also includes the cryopreservation of ovarian tissue as a route to potential fertility preservation in young women with cancer...’

a route to potential fertility preservation in young women with cancer and many of our publications represent significant milestones in the development of this technology. This work also extends to fundamental studies of human follicular development in a xenografting model. More recent work has explored the genesis of the zona pellucida during follicular development and has uncovered previously unknown facts in relation to this structure in both adult and fetal ovarian follicles.

Our research has shown that semen quality does not seem to be low in Australia, in contrast with some other parts of the world. In fact fertile women may be conceiving more quickly than reported in the past. The current information about pregnancy rates and the ranges of semen analysis results in fertile couples provides useful reference data for clinical counselling of infertile couples.

In a recently completed trial, the pregnancy rate with IVF was significantly higher than for intrauterine insemination and therefore was not preferable to IVF.

A male infertility database and classification of diagnoses has been developed that has been useful for a number of studies on causes and outcomes of treatment. A method of fine needle tissue aspiration biopsy of the testis was developed for diagnosis of defects of spermatogenesis and collection of sperm for ICSI. The role of screening investigations for genetic conditions has been successful. Therapeutic trials have included multicentre studies of hormonal methods of male contraception, effectiveness of recombinant gonadotrophin treatment for hypogonadotrophic hypogonadism, and heparin and aspirin treatment for IVF implantation failure.

Genetic and molecular research

The work of the Genetic and Molecular Research Laboratory is directed towards the diagnosis and understanding of genetic anomalies in embryos. A key focus is the development of genetic testing of single cells and this requires sophisticated molecular techniques. The work underpins the clinical Preimplantation Genetic Diagnosis (PGD) service at Melbourne IVF where genetically healthy embryos are identified by testing a single cell biopsied from an embryo. Many Victorian couples have directly benefited from this work and delivered healthy babies. Some IVF couples are at high risk of chromosomal abnormalities in their embryos which prevent them from achieving a successful pregnancy. Other couples have a serious genetic disease in their family and utilise the PGD program to have a healthy baby.

Chromosome translocations can be diagnosed in early embryos using fluorescent *in situ* hybridisation (FISH). The Genetic and Molecular Research Laboratory holds a National Health and Medical Research Council (NHMRC) of Australia embryo research licence to develop novel FISH tests for couples who carry translocations. Some of these translocations have been extremely complex and required sophisticated strategies of molecular testing. Many couples have benefited from this work, avoiding miscarriage and having healthy children.

Some serious diseases, including cystic fibrosis and haemophilia, are caused by a genetic error in a single gene. These diseases can be diagnosed in single cells from embryos by amplifying the small fragments of DNA using the polymerase chain reaction (PCR). Significant research and development is put into developing these tests, and, as a result we have successfully developed single cell monogenic tests for some rare conditions. Many couples have had healthy children after the

Melbourne IVF Genetic and Molecular Research Laboratory has developed a genetic test to identify embryos that are free of a disease that has affected their family.

Clinical reproductive research

Reproductive Services at the Women's, in collaboration with Melbourne IVF, has an active research program in the important area of fertility protection and preservation. This research focuses on measures to help protect and preserve fertility for young patients who are having therapy that is potentially toxic to their gonads as part of their cancer treatment.

We recently completed and are planning studies evaluating the use of a GnRH antagonist and agonists in protecting ovarian function during chemotherapy. Our interim results suggest that a GnRH antagonist given during cyclophosphamide treatment may exert a protective effect on ovarian function in women receiving toxic chemotherapy doses.

We have commenced an ovarian tissue grafting program to preserve fertility for patients who have had ovarian tissue frozen with us prior to their chemotherapy or radiotherapy. For this group of patients the cancer treatment has resulted in ovarian failure, and this program focuses on restoring ovarian function. In appropriate patients, the frozen ovarian tissue is thawed and grafted back to the patient in a painstaking laparoscopic procedure with ovarian slices being put into the inactive ovary and the pelvic side wall. Once there is evidence of ovarian activity, the tissue will be stimulated to produce mature eggs which can be retrieved and fertilised with IVF.

The endocrine metabolic field of research concentrates on improving the gynaecological, reproductive and general health for women with polycystic ovarian syndrome (PCOS). The program particularly focuses on the development of permanent lifestyle changes for patients with endocrine metabolic disorders.

The Big Girls Group (BGG) is a four-month weight management and lifestyle modification program for women requiring either fertility treatment, regulation of menstruation or weight loss (particularly in women with PCOS). The program entails weekly educational sessions focusing on fertility issues and gynaecological health, nutrition, lifestyle, psychological issues and personal development. One hour of exercise, twice a week for the duration of the program is also obligatory. Lifestyle modification is an effective approach, and should be considered as the first line treatment for overweight women with infertility associated with PCOS.



An ICSI dish with a long drop of prepared sperm suspension, drops for handling oocytes and 2µl microdrops for storing isolated sperm prior to freezing.

Other reproductive research

We have recently collaborated in clinical trials assessing a sustained release and thus long-acting follicle stimulating hormone (FSH), aimed to develop a treatment procedure requiring fewer injections for patients.

We are in the final stages of a randomised pilot to assess intrauterine insemination (IUI) versus *in vitro* fertilisation (IVF).

The social and emotional needs of people attending the Women's Reproductive Services and Melbourne IVF have always been considered to be very important, and we have a strong focus on providing an easily accessible counselling service.

The donor programs comprise a large part of the focus for counsellors and many research studies have been undertaken with the aim of gaining a better understanding of the needs of donors and recipients.

A case-control study looking at the relationship between IVF conception and Beckwith-Weideman syndrome (BWS) indicated that there was a small but significant increase in BWS in the IVF group, similar to overseas studies.

In a major longitudinal study questionnaires were completed by 150 women who had conceived via treatment at the Women's/Melbourne IVF. The study found that women who had used Assisted Reproductive Technology (ART) experienced more early parenting difficulties, lower maternal confidence and a higher rate of admission to mother-baby units.

Publications

Ten refereed papers, plus two book chapters.

Post graduate students

One PhD student, plus five other students.

Research funding

Two grants from NHMRC; one grant from British Union of Providential Associations; one grant from Organon Pty Ltd.

Collaborations

Dr Paul Bello, Stem Cell Sciences Pty Ltd; Prof John Aitken, University of Newcastle; Prof David Healy, Monash University; A/Prof Jane Halliday, Murdoch Children's Research Institute; A/Prof James King, University of Melbourne; Dr Mary-Anne Davey, La Trobe University; Dr Katie Moore, Peter MacCallum Cancer Centre.

Research staff

Clinical research

Dr Catharyn Stern, Dr John McBain, Prof Gordon Baker, Dr Lyndon Hale, Dr Rachael Knight, Dr Manuela Toledo.

Administration

Dr Kim Huynh.

Laboratory research

Dr David Edgar, Dr Debra Gook, Dr De-Yi Liu, Dr Gary Clarke, Dr Claire Garrett, Tanya Stewart, Harold Bourne, Janell Archer, Stacey Gwilym.

Research assistants/technicians

Ming-Li Liu, Judy Borg, Angela Nelson.

Psychosocial research

Kay Oke, Kate Bourne, Jenny Marks.

MENTAL HEALTH

Mental health research is conducted within a population health framework that takes into account the complex influences on mental health, encourages a holistic approach to improving mental health and wellbeing, develops evidence based interventions that meet the identified need to population groups, and spans the spectrum from prevention to recovery to relapse prevention.

Recognising mental health and mental illness are on a continuum, our research aims to improve mental health as well as reduce the prevalence and burden of mental health problems and mental illness.

Our research agenda is informed by current national and international research priorities in women's mental health, identified gaps in research, and areas of clinical activity within the Women's.

During 2006 projects included:

- Development of a Consultation Liaison database and clinical indicators and a system for bench marking in our Consultation Liaison Psychiatry service.
- The Iraqi Women's Project enabled examination of the mental health care needs of Iraqi women (and the responses of their husbands to their expressed needs) during pregnancy and the transition to motherhood.
- A comprehensive investigation of psychosocial aspects of gynaecological cancer, focusing on patients' predominant concerns, vulnerability and ways of coping at the time of diagnosis, during and post treatment.
- Recognising that antenatal care provides an opportunity for many women who may not otherwise do so to access health professionals at a time of physical, psychological and social changes. A project has examined mental health issues, psychosocial issues and referral pathways for women accessing acute health services during pregnancy.

The launch of the Centre for Women's Mental Health in August 2006, with the generous support of the Pratt Foundation, will enable the growth of our research activities, expand research opportunities of post graduate students and strengthen our collaboration with university partners.

Publications

Twelve publications in academic journals, together with three book chapters.

Research funding

Our research has been supported by *beyondblue*, the national depression initiative.

Collaborations

Prof Henry Jackson, Dr Gary Robbins, Prof Pip Patterson, School of Psychology, University of Melbourne; Dr Greg Murray, Swinburne University; A/Prof Jane Fisher, Key Centre for Women's Health in Society, University of Melbourne; Prof Leon Piterman, Department of General Practice, Monash University; Dr Pam Snow and Prof John Humphreys, School of Rural Health, Monash University.

‘The launch of the Centre for Women's Mental Health in August 2006, with the generous support of the Pratt Foundation, will enable the growth of our research activities, expand research opportunities of post graduate students and strengthen our collaboration with university partners.’

MICROBIOLOGY & INFECTIOUS DISEASES

Overall, the Women's Department of Microbiology and Infectious Diseases conducts clinical research, as well as cutting edge molecular diagnostics for detection of infections as they relate to Obstetrics, Gynaecology and Neonatology. Research focuses include cervical cancer, sexual health and mother-to-baby infections, with emphasis on providing evidence for evaluations and changes that may translate into clinical practice, affecting patient health.

Professor Suzanne Garland leads the team of eight scientists and five clinical research nurses.

Research activities

Currently the group holds five NHMRC project grants as well as funding from the Cancer Council, Northern Territory Government, and pharmaceutical company-initiated clinical vaccine trials, totalling over \$6 million dollars to date. The following are the key areas of research for the department:

- a** Leading research on human papillomavirus (HPV) and its role in cervical cancer in a number of clinically based research projects, including:
 - Assessment of prophylactic cervical vaccine effectiveness in the Australian population by conducting three phase-three clinical trials which are ongoing;
 - Evaluation of molecular markers that can predict disease recurrence after treatment of cervical abnormalities;
 - Evaluation of genetic and environmental factors responsible for development of cervical cancer. This study is conducted in a twin model;
 - Determination of HPV genotype prevalence in the Australian population (pre and post vaccination).
- b** Our research team have been leaders in development and application of molecular testing for detection of sexually transmitted infection (STI) of marginalised, remote populations by combining sensitive molecular techniques with self-sampling methodology. The methods established have been utilised both nationally and internationally in a number of projects including STI prevalence in various populations such as antenates in Vanuatu, Samoa, Thailand, China and Mongolia. For this we were awarded the Public Health Award for Excellence in Research from the Department of Human Services in Victoria in 1999.

- c** We are currently evaluating an Australia wide assessment of the impact of intrapartum chemoprophylaxis on group B streptococcus (GBS) antimicrobial resistance, the ultimate aim of which is appropriate antibiotics to prevent early onset neonatal GBS sepsis.
- d** The role of probiotics in reduction of sepsis and necrotizing enterocolitis in premature infants is being evaluated. This study is a multicentre trial and will involve 1,000 premature infants.

International activities

- a** World Health Organization (WHO) - One of nine worldwide Reference Laboratories for HPV detection and surveillance. Professor Garland has also been serving as an advisor to WHO for the past decade.
- b** Establishment of the Asian-Oceania Research Organization on Genital Infection and Neoplasia (AOGIN) - brings together clinicians and scientists within the Asian and Oceania regions and whose work is related to genital infections and neoplasia. The aims AOGIN are to promote and develop, at an Asia-Oceania level, research, training, screening, prevention and information concerning genital infections, pre-cancers and cancers in women. Professor Garland is the inaugural President of this organisation. AOGIN meetings are held biennially with the 2006 meeting being held in Cebu, Philippines, where over 500 clinicians and scientists from the region attended.

Post graduate students

In 2006, two PhD (Dr Nicole Lister and Dr Catriona Bradshaw) students matriculated with a further four students continuing their post-graduate research.

Publications

Twenty five peer-reviewed publications, seven reviews and four book chapters.

Presentations

The department has presented research data at 35 scientific and clinical meetings, of which nine were national and 26 were international meetings. Of these, 26 were invited lectures.

NEONATAL PAEDIATRICS

Main research areas

Neonatal research is driven by knowledge of the problems that exist for newborn babies, before, during and after birth, including through the rest of their lives. The major issues confronting newborn babies involve their lungs and their brains. Broadly speaking we have two major research groups, the Respiratory Research Group and the Brain Research Group. However the overlap between the groups and their research is large. In addition there are other researchers and their research does not necessarily fit into either category.

The goal of our research is to reduce long-term health problems in newborn infants, whether they are born too early or very tiny, or whether they are born on time or of normal size at birth. We aim to improve the health of all babies, not just those born at the Women's. Consequently we collaborate with many other researchers throughout Victoria, Australia and the world. We also follow the outcomes of some of our babies for many years, even into adulthood, so we can determine the extent of the problems they may face in later life. We are guided by knowledge from animal and laboratory research, as well clinical research in pregnancy, the newborn period and later in life, in both childhood and early adulthood. The clinical research arises from numerous observational and epidemiological studies, clinical trials, and the synthesis of data from many different trials.

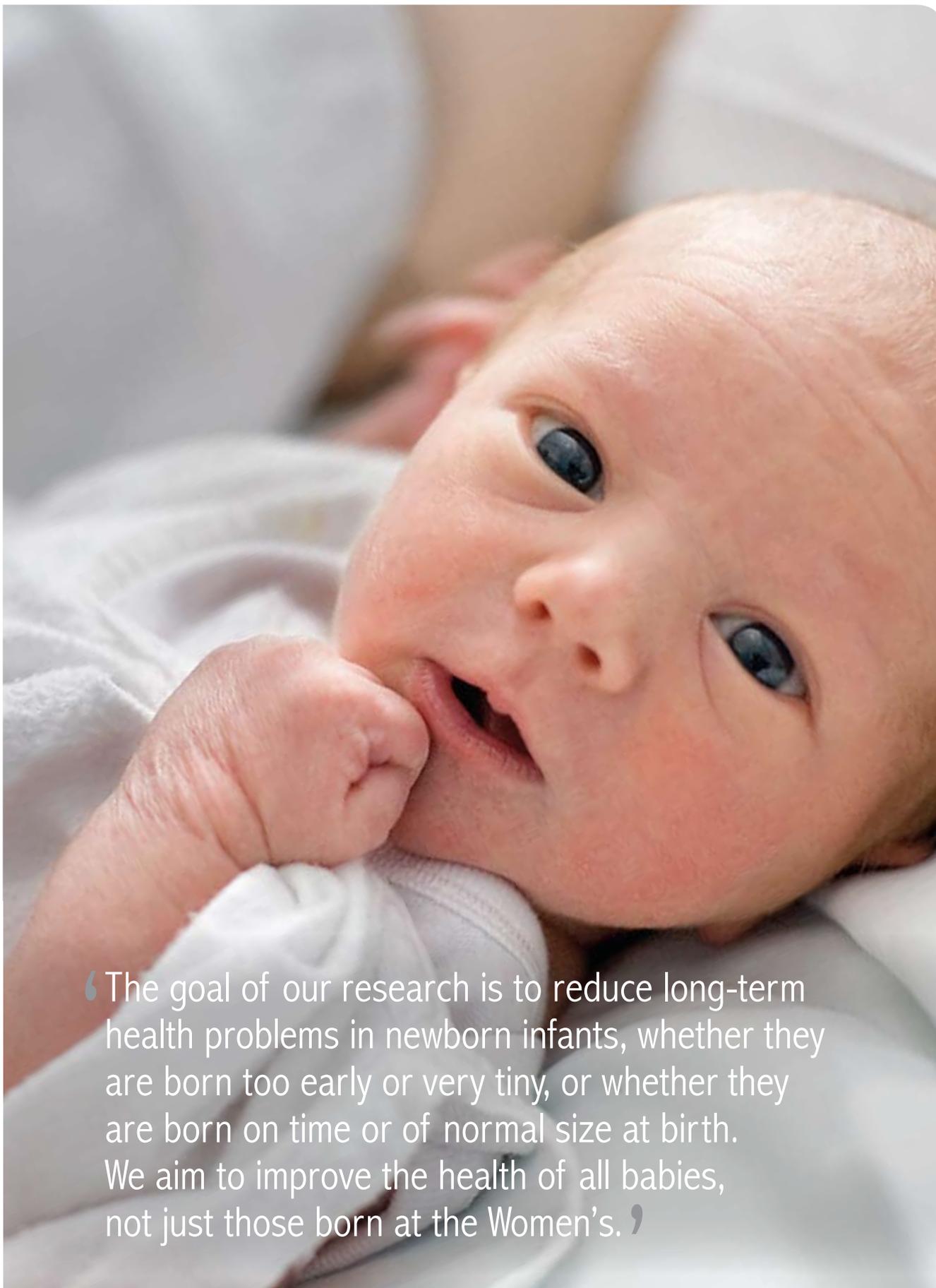
The respiratory group investigated the following areas in 2006:

- Recording how babies respond in the first minutes after birth in the delivery room – this includes not only healthy babies but also babies who may need help to breathe after birth with ventilators, including very tiny or preterm babies.
- Several large international trials of different treatments, including the following:
 - A comparison of two different techniques for supporting breathing after birth in very preterm babies from 25-28 weeks gestational age (15-12 weeks too early). This trial will eventually enrol 600 babies worldwide. It is hoped that a gentler form of assistance with breathing will reduce lung injury in these very immature babies.
 - A trial of caffeine in very tiny babies (<1250 g birthweight). This trial has enrolled 2,000 babies worldwide. The goal is to improve long-term outcome with more survivors free of developmental problems.

- A comparison of different oxygen levels in very preterm babies (<28 weeks gestational age). In conjunction with several similar trials around the world, there will eventually be over 5,000 babies involved in this study.
- Several other smaller trials involve different techniques of helping babies to breathe, including how best to do some of the technical procedures involved.
- Animal studies in sheep, including in the uterus, of the effects of breathing techniques on lung injury – these studies involve our collaborators in the Department of Physiology at Monash University.

The brain research group investigated the following areas in 2006:

- How specialised magnetic resonance imaging of the brain of very tiny or preterm babies can be used to predict long-term outcome.
- The usefulness of brain wave recordings in helping to manage babies who are having seizures.
- How brain wave patterns change in very preterm babies in the first weeks after birth and how these relate to long-term outcome.
- A clinical trial of helping parents of very preterm babies understand their baby's behaviour and development in the first year of life.
- Understanding the causes of brain injury in very preterm babies.
- Evaluation of newborn baby behaviour in the nursery, what causes abnormal behaviour, and how newborn behaviour leads to developmental problems in later life.
- An evaluation of different hormone levels in very preterm babies in the first 6 weeks of life, how those levels affect brain growth and development, and how the hormones affect later development.
- A multicentre international trial of cooling in babies who have suffered from a lack of oxygen around the time of birth.
- Several ongoing long-term follow-up projects involving very tiny or preterm children born in the 1970s, the 1990s, and the 2000s. These studies investigate many aspects of health including growth, general health, breathing problems, school progress, behaviour, and quality of life.



‘The goal of our research is to reduce long-term health problems in newborn infants, whether they are born too early or very tiny, or whether they are born on time or of normal size at birth. We aim to improve the health of all babies, not just those born at the Women’s.’

Research Funding

To support our research, we have had a large program grant and four project grants from the NHMRC. In addition several of our staff are supported by Research Fellowships from the NHMRC. We also have financial support from many other funding agencies.

Publications

Twenty six articles in peer-reviewed international journals, including renowned journals such as the *New England Journal of Medicine* and the *Lancet*.

Postgraduate students

Dr Tony De Paoli, Dr Megan Probyn, Dr Colm O'Donnell, Dr Rod Hunt, Dr Naomi McCallion, Dr Omar Kamlin, Dr David Tingay, Dr Susan Jacobs, Jennifer Dawson, Dr Louise Owen, Alicia Spittle, Dr Gehan Roberts, Dr Nisha Brown, Michelle Wilson-Ching, Carly Molloy, Eleanor Dea'th, Erick Kan, Anastasia Pellicano, Liz Westrup, Deanne Thompson.

Theses passed

Dr Nisha Brown PhD. University of Melbourne. *Very Preterm Infant Neurobehaviour at Term, Concurrent MRI and Two Year Development*. Supervisors Prof Lex Doyle, A/Prof Terrie Inder.

Advanced medical science students

Jasbir Sekhon, Charlotte Reddington, Kate Hodgson, Meagan Butler, Luisa Clucas, Lucy McBride, Melissa Vile, Laura Papillo, Eton Lim, Marianne Mok.

Translation of research into clinical practice

As a consequence of our research in 2006, the following changes to clinical care have occurred:

- Caffeine has become standard in the care of very tiny babies in the first weeks after birth. It is mainly used to help babies to breathe regularly, and is stopped before babies go home.
- For babies who need help coming off the ventilator we now know that a much lower dose of corticosteroid can be used to help them achieve that goal.
- Gentler forms of assisted ventilation are now standard in neonatal intensive care.
- Use of air rather than 100% oxygen for resuscitation at birth.
- During resuscitation of very preterm infants we use a continuous low pressure into the nose, mouth and lungs to help expand the lungs.
- Blood transfusion of preterm infants has been safely reduced by adopting a lower threshold for blood transfusion.

Collaborations

Prof Richard Harding, A/Prof Stuart Hooper and Dr Megan Wallace in the Physiology Department at Monash University; Prof Suzanne Garland, Microbiology Royal Women's Hospital; Dr Barbara Schmidt, Neonatal Services, McMaster; A/Prof Peter Dargaville, Neonatal Unit, Hobart, Tasmania; Prof William Tarnow-Mordi, Westmead Hospital and the University of Sydney Clinical Trials Centre; Prof John Carlin Clinical Biostatistics and Epidemiology Unit, Royal Children's Hospital, Melbourne; Prof Luc Brion, Montefiore Medical Centre, New York, USA Prof Jean-Michel Hascoet, Regional Neonatal Centre, Nancy, France, Dr Terrie Inder and Dr Jeff Neil, Washington University, St Louis; Dr Simon Warfield, Harvard University, Boston.

Research staff

Respiratory research

Brenda Argus, A/Prof Peter Davis, Jennifer Dawson, Dr Omar Kamlin, Bernice Mills, Prof Colin Morley, Dr Liam O'Connell, Dr Colm O'Donnell, Dr Louise Owen, Dr Arjan Te Pas, Dr Kevin Wheeler, Connie Wong.

Brain research

Dr Peter Anderson, Dr Nisha Brown, Dr Noni Davis, Prof Lex Doyle, Dr Julianne Duff, Dr Sue Jacobs, E Kelly, Dr Geoff Ford, Kate Callanan, Cinzia de Luca, Dr Gehan Roberts, Dr Sheryle Rogerson, Alicia Spittle.

ONCOLOGY



Research in the Women's Oncology Unit can be broadly divided into clinical research and laboratory based research with the former usually under the aegis of the Australia & New Zealand Gynaecology Oncology Trials Group (ANZGOG) and the latter in the laboratories at the Gynaecological Cancer Research Centre, now known as the Women's Cancer Research Centre.

Most of the clinical research trials revolve around ovarian cancer and fall into two broad categories, the first being trials of new agents which are usually brought to our trials groups by pharmaceutical companies, and the second "Phase III" trials in which new treatments are compared with the current gold standard, which for ovarian cancer is a combination of carboplatin and taxane chemotherapy.

Most of the Phase III trials involve the use of new agents, either as first line treatment following surgery or alternatively when cancers relapse, comparing new agents with standard "second line treatments" is then undertaken.

Other clinical trials that we are involved in apart from ovarian cancer include a trial of laparoscopic surgery compared with standard surgery in patients with endometrial cancers, and intraperitoneal therapy – that is chemotherapy that is given directly into the abdominal cavity rather than directly into a vein.

Bridging the gap between the laboratory and the bedside are two studies, the first in ovarian cancer and the second cancer of the lining of the womb ("endometrium")

in which patients have been interviewed about their past medical, surgical, family and medication histories and the tumour is sent for genetic analysis to try and correlate changes in the tumour gene profile with the patient's own personal history. Both of these studies are very large studies involving more than 1,000 patients, currently being undertaken in trials supported by the NHMRC.

Other important clinical investigations have included the follow up study looking at pregnancy outcomes in women who have undergone treatment for cervical dysplasia which has suggested that laser treatment, rather than excisional treatments of precancerous changes, gives better outcomes. This has led us to institute a large international cooperative study to examine this further.

Also bridging the laboratory and bedside is a study looking at the immune system in women with cancers. We have noted that there seems to be a cycling of the immune system occurring every 7-10 days, and this cycle may be a useful tool in which to administer low dose chemotherapy in the hope that the body's own immune defences will kill off the cancer cells rather than having to rely on cytotoxic chemotherapy drugs.

Our laboratory based research has concentrated on two areas – the first is the development of a screening test for ovarian cancer. This is a very important issue for the community as more than three-quarters of these cancers present when the disease is very advanced and it is hoped that by finding a screening test, which will allow for earlier diagnosis, a considerable reduction in the death rate and the morbidity of this terrible cancer can be achieved.

We are also looking at the way ovarian cancer spreads using a unique laboratory model which has been developed to allow us to examine important molecules which may be responsible for the detachment of cancer cells and their eventual implantation in secondary sites.

Publications

Twenty six publications in refereed journals eventuated in 2006 together with three book chapters.

Post graduate students

One PhD thesis was completed in 2006, and four theses are currently in preparation. Four PhD students are currently being supervised.

Research funding

Five NHMRC research grants are currently in place, and one NHMRC funded study has just been completed. Other sources of support have been the Australian Rotary Health Research Award, and a BHP Billiton Community Program grant. Funds have been received also from the Anne Foote Foundation for our studies into biomarkers for ovarian cancer and from BOOTS, a community based organisation in Geelong.

Collaborations

Prof Suzanne Garland and A/Prof S Tabrizi, Royal Women's Hospital; Prof M Friedlander, Royal Hospital for Women, Sydney; Prof L Manderson, Key Centre for Women's Health; Profs P Heintz, U Beller, S Pecorelli, W Creasman, FIGO, Milan; Prof M Arbyn, Brussels; Prof J Lumley, Centre for the Study of Mothers and Babies; Dr A Spurdle, QIMR.

Research staff

Laboratory

Prof Greg Rice, Dr Nuzhat Ahmed.

Research technicians

Karen Oliva, Gillian Baker, Nicole Dellios, Clyde Riley.

Research students

Kristy Shield, Ratana Lim, Nicki Konstantacopolus.

Administration

Judi Herschell.

Clinical

Dr Deborah Neesham, Dr Jeffrey Tan, Mr Robert Rome, Dr Serine Foo, Dr Geraldine Goss, Margot Osinski, Sandra Lawler, Juleen Hallo, Amanda Marshall.

PHARMACY

The pharmacy at the Women's has participated in all research projects involving a drug or therapeutic agent.

The majority of our research activities are in assisting the investigators by managing the drug accountability records, randomisation preparation and maintaining dispensing records. Our role as the third person in research is vital to maintain the "double-blind" design of many projects.

Our goal for research is:

- To provide evidence based positive outcomes in the usage of therapeutic agents (dose findings in new and extended indications and to monitor adverse effects)
- To consistently strive to provide a quality pharmacy service that impacts on a valued outcome.

The research projects that pharmacy had some involvement in 2006 are:

- CAP study (Caffeine for Apnoea of Prematurity)
- INIS (International Neonatal Immunotherapy Study)
- lessMAS study (tracheal lavage with exogenous surfactant in meconium aspirated syndrome)
- OVATURE study (OVarian TUmour REsponse)

- Implanon study (multi-centred, randomized double blind placebo controlled study - control of menstrual bleeding in women using Implanon)
- Gestational diabetes : treatment with metformin compared with insulin
- GOG #182 – randomised trial in patients with epithelial ovarian or primary peritoneal carcinoma
- Phenoxodiol Study (phenoxodiol as a chemo-sensitising agent)
- Solabegron study – in women with overactive bladder
- PROGRESS (PROGesterone after previous preterm birth for preventing neonatal RESpiratory distress Syndrome)
- TIPPS study (Thrombophilia In Pregnancy Prophylaxis Study).

Pharmacy also performs ongoing drug usage evaluation and audits of selected drugs as quality assurance projects.

Outputs: the findings are presented at the annual conference organised by the Society of Hospital Pharmacists of Australia.

‘Our role as the third person in research is vital to maintain the “double-blind” design of many projects.’



PREGNANCY RESEARCH CENTRE

The relationship between a mother and her baby is quite literally a partnership for life, not only for the time the baby spends in a mother's womb but also for the entirety of that child's life. This is because a person's blueprint for a healthy life is largely determined by events that occur before birth.

The aim of the Pregnancy Research Centre (PRC) is to understand the cause of common pregnancy disorders which compromise the health of mothers and their babies. We are extremely fortunate to be able to undertake our work in a maternity hospital the size of the Women's which cares for more than 6,000 pregnant women each year, a significant proportion of whom have pregnancies troubled by complications such as miscarriage, pre-eclampsia, fetal growth restriction, gestational diabetes and preterm labour. These common pregnancy complications are associated with significant economic, social and emotional costs to the community. Reductions in the incidence or severity of these pregnancy complications will significantly reduce these costs. The principal beneficiaries of the outcome of the research we undertake are mothers and their babies.

Dr Bill Kalionis, Dr Padma Murthi, Dr Neil Gude and Professor Shaun Brennecke explored the isolation, growth and characterisation of human placental stem cells with a view to establishing their clinical utility in the management of disorders of human health.

Dr Joanne Said, Dr Padma Murthi and Professor Shaun Brennecke, in collaboration with Professor Paul Monagle and Dr Vera Ignjatovic of the University of Melbourne Department of Pathology, are studying the role of placental coagulation factors in the pathogenesis of human pregnancy disorders such as fetal growth restriction and pre-eclampsia.

Dr Penny Sheehan undertook studies into the metabolism of steroid hormones in pregnancy to discover how such hormones may contribute to the onset of labour (pre-term labour in particular) and various complications of pregnancy (especially in obese women).

Dr Padma Murthi, Dr Bill Kalionis and Professor Shaun Brennecke investigated placental growth control genes at a molecular level. The studies will lead to a better understanding of how the growth of the placenta and therefore the fetus is controlled at the molecular level.

‘The principal beneficiaries of the outcome of the research we undertake are mothers and their babies.’

Our work on human pregnancy and its disorders ranges from basic biomedical laboratory research through to clinical studies, treatment trials and public health initiatives. Our mission is “to apply contemporary research techniques to the investigation of clinically important problems in maternal and fetal medicine and related fields, promulgate the findings of such investigations and to use such findings as the basis for evidence-based clinical practice”.

The Pregnancy Research Centre was very active in 2006 with investigations into the following projects. The successful outcomes of these projects are all critical to improving the outcomes for women and babies who suffer from pregnancy complications.

Laboratory projects

Professor Shaun Brennecke collaborated with Dr Eric Moses and Dr John Blangero of the South West Foundation for Biomedical Research in San Antonio, Texas, USA on a NIH funded study searching for the genes responsible for pre-eclampsia.

Dr Neil Gude, Dr Bill Kalionis and Professor Shaun Brennecke employed proteomics methodology to identify placental protein ‘signatures’ characteristic of each of the major pregnancy complications (pre-eclampsia, fetal growth restriction, preterm labour and gestational diabetes). This work will help in the development of blood tests to predict and diagnose these pregnancy disorders.

Clinical projects

Dr Joanne Said was invited to conduct the Thrombophilia in Pregnancy Prophylaxis Study (TIPPS) at the Women's. The TIPPS study is an international, multicentred, randomised controlled trial in which pregnant women with a history of pregnancy complications or venous thromboembolism, and a known thrombophilia, will be randomly allocated to self inject low molecular weight heparin (Dalteparin) throughout their pregnancy to determine the safety and efficacy of this treatment in preventing venous thromboembolic events (VTE), pre-eclampsia, fetal growth restriction and miscarriage/stillbirth.

Dr Penny Sheehan trialled the use of the new generation fetal fibronectin detection units to improve the management of women presenting to the Women's with symptoms and signs of preterm labour. This study will set the scene for the cost-effective use of this technology in Australia.

Dr Nicola Bryan, Dr Bill Kalionis and Professor Shaun Brennecke used clinical and laboratory techniques to study the regulation of fetal growth in twin pregnancies, especially those in which the growth of one twin is impaired compared to the other twin. This project will shed light on the reasons for this common complication of twin pregnancies.

Dr Anne Poliness, Dr Martin Healey and Professor Shaun Brennecke used proteomic methods to investigate proteins in peritoneal fluid and endometrial washings of women with and without endometriosis. The aim of this study was to identify protein biomarkers of clinical use in screening and diagnosing women with endometriosis.

Dr Joanne Said completed an investigation into the impact of thrombophilia disorders on human pregnancy outcomes. These findings will help identify those women with thrombophilia disorders who may benefit from specific anticoagulant treatment during pregnancy.

Research funding

Research funding has been provided from many different sources, including the Royal Women's Hospital Foundation; the University of Melbourne; the National Institutes of Health (NICHD), USA; RANZCOG Research Foundation; the Wenkart Foundation; Clive & Vera Ramaciotti Foundation Major Equipment Grant (Perpetual Trustees); Harold and Cora Brennen Benevolent Trust (Equity Trustees); the Campbell Edwards Trust; Eirene Lucas Foundation; Sunshine Foundation.

Publications

Twenty seven articles in highly-ranked, peer-reviewed international journals, including *Placenta*, *American Journal of Pathology*, *Molecular Human Reproduction*, and *American Journal of Obstetrics & Gynecology*.

Invited international lectures

Professor Shaun Brennecke

Human Reproductive Health through the Ages, Congress Adelaide, Australia, March, 2006.

First Clinical National Obstetric Critical Care Conference, Shanghai, China, October, 2006.

XVIII FIGO World Congress of Gynaecology and Obstetrics, Kuala Lumpur, Malaysia, November, 2006.

Dr Neil Gude

38th International Annual Meeting of the Society for the Study of the Pathophysiology of Pregnancy, Adelaide, Australia, March, 2006.

Dr Padma Murthi

12th International Federation of Placental Association, Kobe, Japan, September, 2006.

Dr Joanne Said

38th International Annual Meeting of the Society for the Study of the Pathophysiology of Pregnancy, Adelaide, Australia, March, 2006.

Theses passed

Dr Alfia Al-Ghafra, PhD University of Melbourne.

Expression and regulation of adrenomedullin in the human placenta and fetal membranes. Supervisors Dr Neil Gude and Professor Shaun Brennecke.

Dr Sreeja Sudhakaran, PhD Monash University. *Placental transfer of anti-HIV drugs.* Supervisor Dr Neil Gude.

Translation of research into clinical practice

Research undertaken by the staff of the PRC continues to guide clinical practice in areas such as preterm labour management (eg the use of fetal fibronectin testing and the use of tocolytic therapy), pre-eclampsia management (eg the role of low-dose aspirin therapy) and the care of pregnant women with thrombophilia disorders.

Pregnancy Research Centre staff

Prof Shaun Brennecke, Dr Bill Kalionis, Dr Neil Gude, A/Prof James King, Mr Anthony Borg, May Grgurinovic, Dr Padma Murthi, Dr Susie Ymer, Sue Nisbet, Sue Duggan, Michelle Cram, Nicola Bryan, Dr Anne Poliness, Dr Joanne Said, Dr Penny Sheehan, Janet Stevenson, Jo Bruhn.

Visiting researchers

Dr Haiying Liu, A/Prof, Department of Obstetrics and Gynaecology, Qilu Hospital of Shandong University, Shandong, People's Republic of China; Gard Solberg, University of Oslo, Oslo, Norway; Bjoern Gutierrez, University of Oslo, Oslo, Norway.

Postgraduate students

Amy Chui, Elizabeth Fitzpatrick, Natalie Lovrek, Jie Men, Cameron Nowell, Gayathri Rajaraman, Renu Shankar, Penelope Sheehan, Joanne Said, Anne Poliness, Nicola Bryan, Tammie Money.



Advanced medical science students

Sarah Kalus, Rehana Ratnatunga, Aveline Loh, Aliya Azlan, Azni Abdul Wahab, Vivien Gu, Murnihayati Hassan, Bonnie Swan, Ruoxin Tsui.

Collaborations

International

Prof Rigmor Austgulen, Faculty of Medicine, Institute of Cancer Research & Molecular Biology, Norwegian University of Science & Technology, Trondheim, Norway; Dr John Blangero, Dr Harald Göring, Dr Eric Moses and Dr Katy Freed, Southwest Foundation for Biomedical Research, San Antonio, Texas, U.S.A.; Prof Gernot Desoye, Clinic of Obstetrics and Gynaecology, University of Graz, Graz, Austria; Dr Jan Jaap Erwich, Department of Obstetrics & Gynaecology, University Hospital Groningen, Groningen, the Netherlands; Prof John Higgins, Head, Department of Obstetrics & Gynaecology, University College, Cork, Ireland; Dr Jeff Keelan, Liggins Institute, Auckland New Zealand; Dr Martin Knofler, Medical University of Vienna, Vienna, Austria; Prof Borghild Roald, Faculty of Medicine, University of Oslo, Oslo, Norway; Prof Lloyd Ruddock, Biocenter Oulu and Department of Biochemistry, University of Oulu, Finland; Prof Joe Terwilliger, Columbia Genome Center & New York State Psychiatric Institute, Columbia University, New York, U.S.A.

National

Dr Kathy Andrews, Clinical Tropical Medicine, Queensland Institute of Medical Research, Brisbane; Prof James Best and Dr Suzanne Rogers, Department of Medicine, University of Melbourne, St Vincent's Hospital, Melbourne; Associate Professor Stephanie Brown, Murdoch Children's Research Institute, RCH; Professor Paul Colditz and Dr Christine East, Perinatal Research Centre, Royal Women's Hospital, Brisbane; Professor Des Cooper, Department of Biological Sciences, Macquarie University, Sydney; Dr Kate Elliott, Autogen Pty Ltd, Melbourne; Dr Susan Forrest, Director, Australian Genome Research Facility, Melbourne; Prof Lyn Griffiths, Director, Genomics Research Centre, Griffith University, Gold Coast Campus, Brisbane; A/Prof Roger King, Department of Pharmacology, Monash University, Melbourne; Prof Paul Monagle and Dr Vera Ignjatovic, Department of Pathology, University of Melbourne; Professor Roger Nation and Dr Craig Rayner, Department of Pharmacy Practice, Victorian College of Pharmacy, Monash University, Melbourne; A/Prof Helena Parkington and Dr Marianne Tare, Department of Physiology, Monash University, Melbourne; Dr Tony Perkins, Heart Foundation Research Centre, School of Health Science, Griffith University, Southport; Dr Claire Roberts, Department of Obstetrics and Gynaecology, University of Adelaide, Adelaide; Prof Roy Robins-Browne, Microbiology & Infectious Diseases, Murdoch Children's Research Institute; Dr Simon G Royce, Genetic Epidemiology Unit, Department of Pathology, University of Melbourne; Prof Gordon Baker and Dr Martin Healey, Department of Obstetrics & Gynaecology, University of Melbourne, Royal Women's Hospital.

OTHER PREGNANCY RESEARCH

Main research areas

Pregnancy research at the Women's encompasses a wide range of topics and subject areas. Pregnancy research has been subdivided into smaller more specific groupings to enable us to best present and describe our work, and to provide some reflection of how the various research teams work. At present these subgroups are:

- Pregnancy Research Centre
- Diabetes
- Multiple pregnancy
- Ultrasound
- Antenatal care
- Intrapartum care
- Postnatal care and breastfeeding

Our aim is that these groups reflect a multidisciplinary approach to researching a range of specific areas. Some of these groups have well established research programs, whereas others are in their infancy, and there may be areas of pregnancy research that do not fit specifically into one category.

Antenatal, intrapartum and postnatal care, and breastfeeding

The Women's is starting to build up a program of research looking at how we provide care for women attending here for pregnancy care. We are using a range of approaches including implementing and evaluating new models of care; conducting surveys and focus groups with women and engaging with staff about their views and ideas. There has also been a focus on building research capacity among midwives, nurses and allied health clinicians, groups who have traditionally been less involved in actually undertaking research at the Women's.

Current projects

Caseload midwifery trial: (Helen McLachlan, Della Forster, Mary-Ann Davey, Tanya Farrell, Prof Jeremy Oats, Ulla Waldenström, Lisa Gold, Judith Lumley). A randomised controlled trial comparing one to one midwifery with the other standard options of care. The trial is called COSMOS ('COMparing Standard Maternity care with One on one midwifery Support'). We will recruit about 2,000 women to the trial in total. **Funding:** NHMRC Project Grant. **Collaborations:** Royal Women's Hospital, La Trobe University. **Status:** 2006 – funded, 2007 recruiting.

Exploring an alternative approach to early postnatal care: (Della Forster, Helen McLachlan, Jane Yelland, Joanne Rayner, Lisa Gold, Tanya Farrell, Tracey Savage). The Women's is exploring alternative ways to care for women after they have had their baby. We are undertaking a pilot study where 100-200 women are recruited at 26 weeks gestation and offered the opportunity to go home earlier after the birth and receive increased numbers of domiciliary home visits at a time that is convenient to them. **Funding:** Department of Human Services and La Trobe University. **Collaborations:** Royal Women's Hospital, La Trobe University, Murdoch Children's Research Institute. **Status:** 2006 – funded, 2007 recruiting.

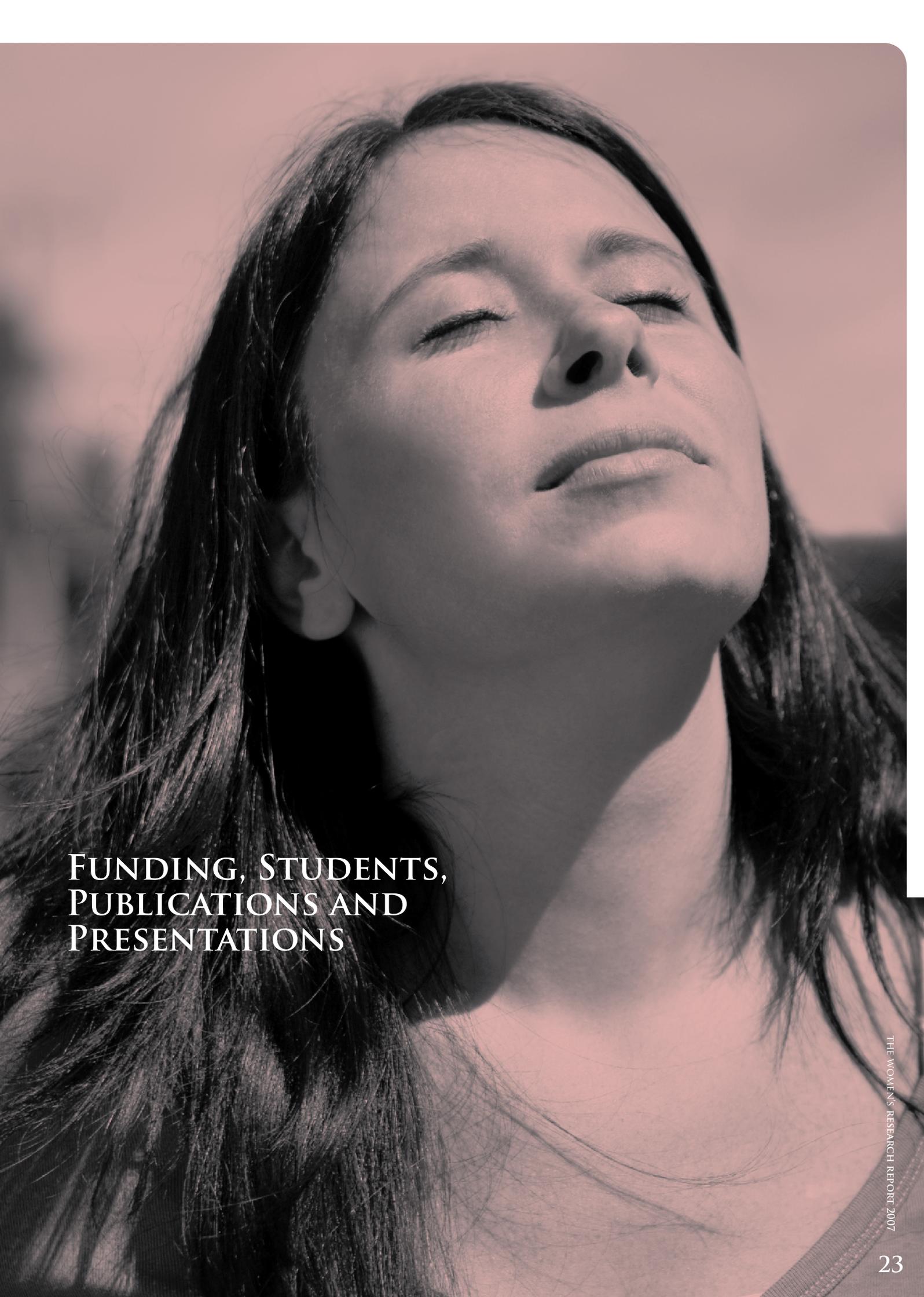
Other projects: There are a number of projects related to breastfeeding that are commencing or being planned. One is exploring women's attitudes to and experiences of breastfeeding for women who are above their ideal weight (Lisa Amir, Della Forster, Kate Stern, Rachael Ford). Another multisite study will look at breastfeeding outcomes for women who leave hospital feeding mainly expressed breast milk (as opposed to attaching and breastfeeding). The Women's is also collaborating with Mercy Hospital for Women in a pilot study of antenatal milk expressing for women with diabetes/gestational diabetes and on insulin during pregnancy. This is a widespread practice with no evidence around efficacy or harm. Our aim is that the pilot leads to a randomised controlled trial.

Research funding

NHMRC project grant; DHS specific funding; La Trobe University small grants; Royal Women's Hospital Foundation.

Publications

Eight articles in peer-reviewed international journals.



FUNDING, STUDENTS,
PUBLICATIONS AND
PRESENTATIONS

RESEARCH FUNDING IN 2006

Funding from government sources

National Institutes of Health USA

Fraser IS, Weiberg E, Hickey M, O'Connor MV, **Palmer D**, Salamonsen LA, Findlay JK. Menstrual disturbances in women. \$273,000

Brennecke S, Moses E. Identification of pre-eclampsia susceptibility genes. \$3,500,000

Metzger BE, **Oats JJN**, Trimble E, Hadden D, Coustan D, Hod M, Dyer A. Hyperglycemia and adverse pregnancy outcome. \$20,000,000

Mullholland E, Carapetis J, Russell R, Pryor J. **Garland SM** (Associate Investigator). Appropriate pneumococcal vaccination of infants in Fiji. \$2,000,000

National Health and Medical Research Council of Australia

Program grants

No. 394100. Harding R, **Morley CJ**, Hooper S, **Davis PG**, Cole T. Novel strategies for improving respiratory support and outcomes for very preterm babies. \$8,050,000

Project grants

No. 250403. Rowan J, Hague W, Haslam R, **Oats J**. Metformin and insulin in treatment of GDM. \$81,500

No. 251632. Galea M, **Sherburn M**, Carey M, Bird M. The effect of pelvic floor muscle training for the management of incontinence in older women: a single blind randomised trial. \$305,490

No. 203200. **Jacobs S, Morley C, Inder T, Doyle L, Stewart M**, Gluckman P. Randomised controlled trial of systemic hypothermia in asphyxiated newborn infants. \$385,500

No. 234418. Bruinsma F, **Tan J, Quinn M**. Lumley J. Perinatal outcomes following treatment for cervical dysplasia.

No. 284512. **Doyle LW**, Boyd R, **Inder T**, Reddihough D. Randomised trial of preventative care at home for preterm infants. \$621,000

No. 339435. Spurdle A, Webb P, Purdie D, Obermair A, **Quinn M**. Molecular epidemiology of endometrial cancer. \$1,452,000

No. 350326. **Doyle LW**, Haslam R, Hiller J. School-age outcomes of very preterm infants and antenatal magnesium sulphate therapy – a randomised controlled trial. \$675,000

No. 400069. **Liu DY, Baker HWG**. Male infertility and defective spermocyte interaction. \$239,700

No. 401267. Aitken RJ, **Baker HWG**. Molecular basis of defective sperm function. \$232,500

No. 433040. McLachlan H, **Forster D**, Davey M-A, Lumley J, **Farrell T, Oats J**, Gold L, Waldenstroem U. Caseload midwifery for women at low risk of medical complications: a randomised controlled trial. \$583,125

No. 353386. Tarnow-Mordi W, **Morley CJ, Davis PG, Doyle LW**, Askie L. Which oxygen saturation should we use for very premature infants? A randomised controlled trial. \$2,200,000

Other NHMRC Grants – Enabling Grant

No. 350326. Crowther C, **Doyle LW**, Flenady V, Roberts C, Lumley J. Interdisciplinary maternal perinatal action on clinical trials (IMPACT) Collaboration. \$2,000,000

Other NHMRC Grants – Personal Support

Davis PG	Practitioner Fellowship
Garland SM	Practitioner Fellowship
Hacking D	Health Professional Research Fellowship
Spittle A	PhD Scholarship
Roberts G	PhD Scholarship

Other government grants

Victorian Centre of Excellence in Depression and Related Disorders

Murray G, **Judd F**. Automated longitudinal monitoring to predict and counter relapse in bipolar disorder: a pilot investigation of effectiveness. \$46,000

Funding from industry

BHP Billiton Community Program Grant. **Rice G, Ahmed N, Quinn M**. Development of an early screening test for ovarian cancer. \$200,000

CSL and GlaxoSmithKline. **Garland SM**, Smith D, Condon J, Brotherton J, **Tabrizi SN**, McIntyre P. HPV genotype prevalence study in Australian women (indigenous, nonindigenous, rural, urban) WHINURS study (women, HPV prevalence, indigenous, nonindigenous, urban, rural study). \$1,110,167

CSL Pharmaceuticals. **Garland SM, Quinn M**, Fairley K, Carter R, **Palmer D, Tan J**, Pirotta M, Conway L. Quality of Life: Assessing the psychosocial burden of HPV-related illness or preventive interventions among Australian women in Victorian hospital and sexual health centres. \$161,710

Dako Cyotomation – Denmark. **Tabrizi S, Garland SM**. Assessment of p16INK4a (p16) as a progression marker on Thinprep cytoprep samples of patient undergoing treatment for cervical intraepithelial neoplasia (CIN). \$80,000

GlaxoSmithKline Australia Pty Ltd. **Garland SM**, Tan J. HPV 015 VIVIANE Study: A phase III, double-blind, randomised controlled study to evaluate the safety, immunogenicity and efficacy of GlaxoSmithKline Biological's vaccine administered intramuscularly according to a 3-dose schedule in healthy adult female subjects aged 26. \$595,127

GlaxoSmithKline Pharmaceuticals. **Garland SM**. Multicentre HPV vaccine clinical trial. A phase III double blind randomised controlled multicentre study to evaluate the efficacy of GSK Biological's HPV-16/18 VLP/ASo44 vaccine compared to hepatitis A vaccine as control in prevention of persistent HPV-16. \$512,425.00

Grants in aid: CSL (C/wealth Serum Labs Victoria) and GSK (GlaxoSmithKline). **Garland SM**, Smith D, Condon J, Brotherton J, **Tabrizi S**, McIntyre P. HPV genotype prevalence study in Australian women (indigenous, nonindigenous, urban, rural) study (WHINURS). \$1,110,167

MERCK with CSL Pharmaceuticals. **Garland SM**, Hedt A, Straus W, Bulotsky M, Doherty R, Sinclair P. COMVAX Study. \$57,000

Merk Sharp & Dohme (MSD) Pharmaceuticals. **Garland SM**. Multi-centre HPV vaccine clinical trial: Immunogenicity and safety of quadrivalent HPB (Types 6, 11, 16, 18) L1 virus-like particle (VLP) vaccine in 16-23 year old women with an immunogenicity bridge between the HPV 16 components of the quadrivalent vaccine. \$1,165,613

Organon. Stern C, Hale L, Toledo M, Edgar D, Gook D. Pathology sponsorship. Grant for ovarian tissue grafting.

Roche Molecular Systems. **Tabrizi S, Garland SM**. Amplicor and LA assay tests; Evaluation of line blocks in HPV DNA detection. \$18,600

Roche Molecular systems. **Tabrizi S, Garland SM**. 1500 Amplicor and 1700 LA assay tests. Retail kits HPV DNA genotype in patients with dysplasia and cervical cancer. \$230,000

Roche Molecular Systems. **Tabrizi S, Garland SM**. Evaluation and comparison of HPV detection and typing system on Thinprep cytoprep samples of patient undergoing treatment for cervical intraepithelial neoplasia (CIN). \$250,000

Serono, Australia. **Baker HWG, Liu DY, McBain JC**. A controlled trial of ovulation stimulation with intrauterine insemination or in vitro fertilisation. \$240,000

Serono, Australia. **Stern K**, Toledo M, Whitehead J. Drug & Pathology Sponsorship. Grant for GnRH antagonist study.

Other research grants

Australian Rotary Health Research Award. **Rice G, Ahmed N, Quinn M**. Early detection of ovarian cancer. \$240,000

British Union of Providential Associations. Healy DL, Halliday J, **King J, Baker HWG**. Analysis of perinatal outcomes for mothers and singleton babies after ART. \$89,875

Campbell Edwards Trust Grant. **Said J, Murthi P, Brennecke S**. Identification and characterisation of placental coagulation markers in normal pregnancies and in pregnancies complicated by pre-eclampsia and fetal growth restriction. \$25,000

Cecilia Kilkeary. **Kalionis B, Murthi P, Freed K, Gude N, Brennecke S**. Human stem cells from the placenta; a non-controversial, plentiful source for progressing medical research and developing new medical therapies. \$5,344

Clive & Vera Ramaciotti Foundation Major Equipment Grant. **Brennecke S**. Equipment grant. \$25,000

Eirene Lucas Foundation Grant. **Said J, Murthi P, Brennecke S**. Identification and characterisation of placental coagulation markers in normal pregnancies and in pregnancies complicated by pre-eclampsia and fetal growth restriction. \$9,000

Fertility Society of Australia. Petersen K, **Baker HWG**. Laws regulating assisted reproductive technologies: Current developments in Australia and Britain. \$7,616

Harold and Cora Brennen Benevolent Trust Grant (Equity Trust). **Kalionis B, Gude N, Murthi P, Brennecke S**. Human stem cells from the placenta and umbilical cord; a non-controversial, plentiful source for progressing medical research and developing new medical therapies. \$19,974

Jack Brockhoff. **Kalionis B, Murthi P, Gude N, Brennecke S**. Human stem cells from the placenta and umbilical cord; a non-controversial, plentiful source for progressing medical research and developing new medical therapies. \$59,000

La Trobe University Faculty Grant. Davey MA, **Forster D**, McLachlan H, **Amir L**, Gold L, Rayner J. A feasibility study for telephone peer support in the early postnatal period to increase breastfeeding duration. \$9,884

La Trobe University Faculty Grant. Yelland J, **Forster D**, McLachlan H, Rayner J, Gold L. The feasibility and development of a patient preference package of postnatal care. \$9,517

La Trobe University Faculty Grant. **Forster D**, Rayner J, McLachlan H, Yelland J. A state-wide review of postnatal care in private hospitals in Victoria. \$9,930

Laboratory and Communities Genetics. **Rowlands S**, Lewis S, McGillvray G, Halliday J. Follow-up of prenatal detection and management of fetal abnormality. \$15,000

L.E.W. Carty Charitable Fund, **Sheehan P**. Obesity and its effect on pregnancy. \$9,020

Marion & EH Flack. **Murthi P, Kalionis G, Brennecke S**. Understanding the molecular mechanism of fetal growth restriction; a pregnancy disorder that prevents a healthy start to life. \$26,100

MCHR, La Trobe University. Yelland J, **Forster D**, McLachlan H, Rayner J, Gold L. The feasibility and development of a patient preference package of postnatal care. \$25,000

MCHR, La Trobe University. Rayner J, **Forster D**, McLachlan H, Yelland J. A state-wide review of postnatal care in private hospitals in Victoria. \$25,000

MCHR, La Trobe University. **Forster D**, McLachlan H, Davey MA, Amir L, Gold L, Rayner J. A feasibility study for telephone peer support in the early postnatal period to increase breastfeeding duration. \$25,000

Murdoch Childrens Research Institute (MCRI) project grant. **Rowlands S**, Lewis S, McGillvray G, Halliday J. Follow-up of prenatal detection and management of fetal abnormality. \$30,000

Ophthalmic Research Institute of Australia. Robman L, Guymer F, **Garland SM, Tabrizi SN**. Identification of chlamydia pneumoniae in macular tissue from the eyes affected by age-related macular degeneration. \$31,550

RANZCO Eye Foundation Grant. **Garland SM, Tabrizi S**, Guymer R, Taylor H. Chlamydia pneumoniae infection and age-related macular degeneration. \$31,500

RANZCOG Glyn White Research Fellowship. **Said J**. Identification and characterisation of placental coagulation markers in normal pregnancies and in pregnancies complicated by pre-eclampsia and fetal growth restriction. \$60,000

RANZCOG Brown Craig Travelling Fellowship. **Said J**. To attend the ISSHP conference in Portugal in 2006. \$2,500

Royal Women's Hospital Foundation. **Hardiman A**, Shortland LL, Burgen G. Intellectual disability and unplanned pregnancy and abortion. \$29,000

Royal Women's Hospital Postgraduate Scholarship for PhD Research. **Hardiman A**. Models of service delivery to women experiencing unplanned/unwanted pregnancy and abortion. \$11,000

Sunshine Foundation. **Sheehan P**. Fetal fibronectin. \$2,500

Sunshine Foundation. **Murthi P, Kalionis B, Gude N, Brennecke S**. Understanding the molecular mechanism of fetal growth restriction; a pregnancy disorder that prevents a healthy start to life. \$4,100

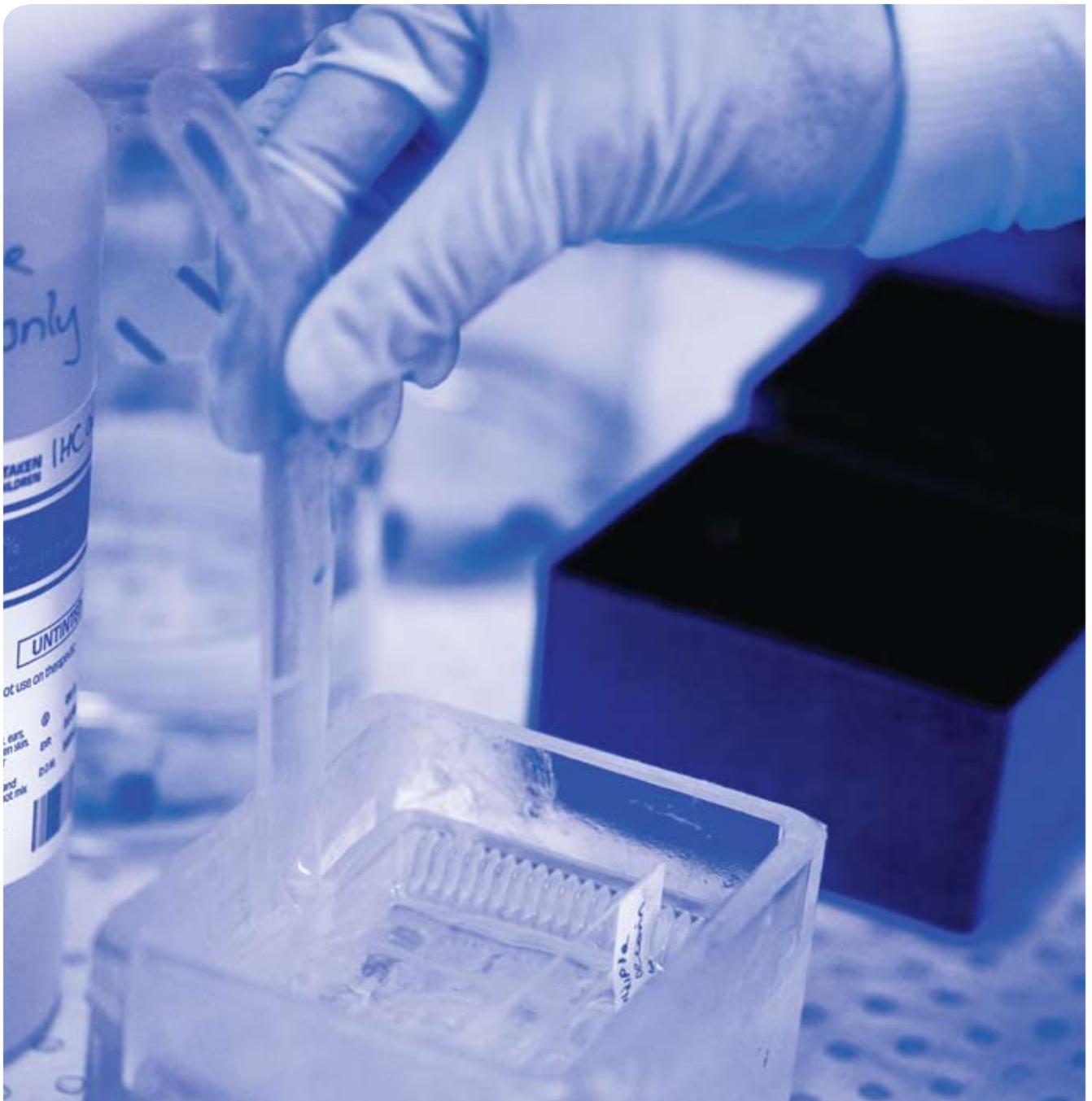
The Anne Foote Foundation. **Rice G, Ahmed N, Quinn MA**. Biomarkers for Ovarian Cancer. \$50,000

University of Melbourne Equipment Grant. **Brennecke S** & staff of the Pregnancy Research Centre. Equipment grant. \$25,000

University of Melbourne, Melbourne Research Grant. **Brennecke S, Kalionis B**, King R. Pathogenesis of pre-eclampsia: effects of microparticle-derived proteins on microvascular endothelial cells. \$23,834

University of Melbourne, Melbourne Research Grant. **Murthi P, Kalionis B, Gude N, Brennecke S**. The role of placental transcription factors in the pathogenesis of fetal growth restriction. \$23,875

VQV Victorian Travelling Fellowship 2006-2008. **Sheehan P**. Distressing birth and its impact on mental health. \$30,000



STUDENTS IN 2006

Postgraduate degrees

PhD

Alfia Al-Ghafra. Expression and regulation of adrenomedullin in human placenta and fetal membranes. University of Melbourne. Supervisors Prof Shaun Brennecke, Dr Neil Gude

Catriona Bradshaw. Randomised controlled trial of metronidazole treatment of asymptomatic bacterial vaginosis (BV) in non-pregnant women. University of Melbourne, Department of Public Health. Supervisors Prof Suzanne M Garland, Dr Sepehr Tabrizi

Phillis Chua. A longitudinal study of genotype and phenotype correlations in Huntington's disease. University of Melbourne. Supervisor Prof Fiona Judd

Amy Chui. The role of homeobox gene DLX3 and DLX4 in human trophoblast cells. University of Melbourne. Supervisors Prof Shaun Brennecke, Dr Bill Kalionis, Dr Padma Murthi

Jenifer Dawson. Studies of pulse oximetry during neonatal resuscitation. University of Melbourne. Supervisors Prof Colin Morley, A/Prof Peter Davis

Elizabeth Fitzpatrick. Identification of the pre-eclampsia/eclampsia susceptibility gene(s) at the PREG1 locus on Chromosome 2. University of Melbourne. Supervisor Prof Shaun Brennecke

Alice Forwood. Social networks and mental health. University of Melbourne. Supervisor Prof Fiona Judd

Michelle Giles. Women, HIV and reproduction in Australia and the Asia Pacific Region. Monash University. Supervisor Prof Suzanne M Garland

Margaret Heffernan. What do women understand about human papillomavirus (HPV)? University of Melbourne, Department of Paediatrics. Supervisor Prof Suzanne M Garland

Jane Hocking. Prevalence of Genital Chlamydia using postal home-sampled urine test kits. Macfarlane Burnett Centre for Medical Research. Supervisor Prof Suzanne M Garland

Cynthia Holland. Gynaecological malignancy: a comprehensive medical, emotional and psychological investigation of the impact of gynaecological malignancy on 79 women and their families, particularly dependent children over a 15 year period (1991-2006). University of Melbourne. Supervisor Prof Michael Quinn

Alex Holmes. Prevention of psychological disturbances in patients following major trauma too early. University of Melbourne. Supervisor Prof Fiona Judd

Rod Hunt. The relationship of the neuroendocrine axis to brain development in infants less than 30 weeks' gestation. University of Melbourne. Supervisor Prof Lex W Doyle

Yasmin Jayasinghe. Sexual abuse and human papillomavirus infection in children. University of Melbourne. Supervisors Prof Suzanne M Garland, Dr Sepehr Tabrizi

Angela Komiti. Diabetes and pregnancy: exploring psychological factors influencing the seeking of pre-pregnancy care. University of Melbourne. Supervisor Prof Fiona Judd

Nicki Konstantacopoulos. Phytoestrogen Induced Gene Changes in Endometrial Cancer Cells. University of Melbourne. Supervisor Prof Michael Quinn

Ratana Lim. Identification and characterisation of biomarkers involved with ovarian cancer progression. University of Melbourne. Supervisors Prof Greg Rice, Dr Nuzhat Ahmed and Prof Michael Quinn

Nicole Lister. Evaluation of Bacterial STI Acquisition by MSM in Melbourne: Implications for STI and HIV Control. University of Melbourne, Department of Public Health. Supervisors Prof Suzanne M Garland, Dr Sepehr Tabrizi

Natalie Loverek. Isolation and characterisation of placental stem cells. University of Melbourne. Supervisors Dr Bill Kalionis, Dr Padma Murthi, Prof Shaun Brennecke, Dr Neil Gude

Jie Men. Investigating biochemical differences between women with high BMI and normal BMI in pregnancy. University of Melbourne. Supervisor Prof Shaun Brennecke, Dr Penny Sheehan

Nisha Menzies/Brown. Very Preterm infant neurobehaviour at term, concurrent MRI and two year development. University of Melbourne. Supervisor Prof Lex W Doyle

Carly Molloy. Visual processing in very preterm children in adolescence. University of Melbourne. Supervisors Dr Peter Anderson, Prof Lex W Doyle

Colm O'Donnell. Studies of Neonatal Resuscitation. University of Melbourne. Supervisors Prof Colin Morley, Dr Peter Davis

Anastasia Pellicano. The effect of different pressure strategies on lung function during high frequency oscillatory ventilation (HFOV) in animal models of lung disease. University of Melbourne. Supervisor Prof Lex W Doyle

Gayathri Rajaraman. The role of homeobox gene HLX1 in human trophoblast cells. University of Melbourne. Supervisors Prof Shaun Brennecke, Dr Bill Kalionis, Dr Padma Murthi

Gehan Roberts. Bridging the gap: identification of academic vulnerability and intervention in the preschool period for very preterm children. University of Melbourne. Supervisors Prof Lex W Doyle, Dr Peter Anderson

Renu Shankar. Markers of spontaneous labour. University of Melbourne. Supervisor Prof Shaun Brennecke

Penny Sheehan. The role of progesterone metabolites in human parturition. University of Melbourne. Supervisor Prof Shaun Brennecke

Kristy Shield. Characterisation of ovarian cancer spheroids: a model of cancer progression. Deakin University. Supervisors Dr Nuzhat Ahmed, A/Prof Leigh Ackland and Prof Greg Rice.

Alicia Spittle. A randomised controlled trial of the effects of preventative care program at home for premature infants on motor outcome. University of Melbourne. Supervisor Prof Lex W Doyle

Tanya M Stewart. Sentinel surveillance on semen quality and time to pregnancy. University of Melbourne. Supervisor Prof HW Gordon Baker

Deanne Thompson. Understanding neurodevelopmental outcomes in preterm infants utilizing diffusion tensor MRI. University of Melbourne. Supervisor Prof Lex W Doyle

David Tingay. Studies of High Frequency ventilation. University of Melbourne. Supervisor Prof Colin Morley

Lyn Watson. Early births: a case-control study of very preterm birth. LaTrobe University. Supervisor Dr Della Forster

Elizabeth Westrup. Adult psychiatric outcomes of very low birth weight survivors. University of Melbourne. Supervisors Dr Peter Anderson, Prof Lex W Doyle

Michelle Wilson-Ching. Attention in very preterm children in adolescence. University of Melbourne. Supervisors Dr Peter Anderson, Prof Lex W Doyle

MD

Nicola Bryan. The molecular basis of idiopathic growth restriction: the role of homeobox genes in the placentas of twins discordant for growth. University of Melbourne. Supervisors Prof Shaun Brennecke, Dr Bill Kalionis, Dr Padma Murthi

Anthony DePaoli. Studies of neonatal CPAP. University of Melbourne. Supervisor Prof Colin Morley

Susan Jacobs. Whole body hypothermia in severe perinatal asphyxia. University of Melbourne. Supervisors Prof Lex W Doyle, Prof Colin Morley

Omar Kamlin. Studies of neonatal extubation. University of London. Supervisor Prof Colin Morley

Naomi McCallion. Volume guarantee ventilation. University of Bristol. Supervisor Prof Colin Morley

Joanne Said. Inherited thrombophilia and adverse pregnancy outcome. University of Melbourne. Supervisor Prof Shaun Brennecke

Other postgraduate degrees

Jessica Collins, D Psych. The role of collective community factors in the promotion and prevention of youth suicide in Australian communities. University of Melbourne. Supervisor Prof Fiona Judd

Dennis Mazalin, D Psych. Social phobia and the internet: an investigation into online usage, self reported effects, anxiety and cognitive factors. Monash University. Supervisor Prof Fiona Judd

Marcus Gabrielsen, joint thesis with Marie Nerhus. Placentation of expression of homeobox genes in extravillous trophoblasts in first trimester pregnancies. Faculty of Medicine University of Oslo, Norway. Supervisors Dr Bill Kalionis, Dr Padma Murthi

Erick Kan, M Med. Perinatal growth impairment among extremely low birth weight preterm infants: associations with long term cognitive, educational and motor abilities. University of Melbourne. Supervisor Prof Lex W Doyle

Rebecca Collins, M Midwifery, PinC: A new way of supporting postnatal care. LaTrobe University. Supervisor Dr Della Forster

Tracey Savage, M Midwifery. A review of postnatal documentation in Victoria. LaTrobe University. Supervisor Dr Della Forster

Emily Ashby, M Physio. Effect of a postnatal exercise and education program a "Mother & Baby Program" on risk of post natal depression. University of Melbourne. Supervisor Margaret Sherburn

Melinda Cooper, M Physio. Evaluation of a new measurement system for pelvic floor muscle function. University of Melbourne. Supervisor Margaret Sherburn

Santha Tisseverasinghe, M Physio. Ultrasound biofeedback in the treatment of elderly with stress urinary incontinence. University of Melbourne. Supervisor Margaret Sherburn

Eleanor Dea'th, M Psych. Speech and language in very preterm children. University of Melbourne. Supervisors Dr Peter Anderson, Prof Lex W Doyle

Christine Lazzar, Master Public Health. Creating champions: a workshop evaluation. LaTrobe University. Supervisor Marg D'Arcy

Rebecca Newman, Postgrad Dip in Psych. Illness perceptions of mental health problems. A rural perspective. Monash University. Supervisor Prof Fiona Judd

Jingxi Yew, Honours thesis. Assessment of circulating Chlamydia trachomatis serovars/genotypes among sexually active population 2006-07. University of Melbourne. Supervisor Prof Suzanne Garland

Undergraduate degrees

B Med Sc

Marlina Abraham. Polycystic Ovarian Syndrome in a normal and overweight population is a risk factor for cardiovascular disease compared to weight matched controls. University of Melbourne. Supervisors Dr Rachael Knight, Dr Kate Stern

Aliya Azlan. The role of the PXR in human parturition. University of Melbourne. Supervisor Dr Penny Sheehan

Meagan Butler. The adult growth and stature of extremely low birth weight survivors. University of Melbourne. Supervisor Prof Lex W Doyle

Li Yen Chen. Satisfaction survey of the Breastfeeding Education and Support Services, Royal Women's Hospital, Melbourne. University of Melbourne. Supervisor Dr Lisa Amir

Luisa Clucas. Pulse Oximetry in very preterm infants. University of Melbourne. Supervisor Prof Lex W Doyle

Michelle Colomiere. Epidermal growth factor induced epithelial mesenchymal transition in epithelial ovarian carcinoma cells. Deakin University. Supervisors Dr Nuzhat Ahmed and A/Prof Leigh Ackland

Vivien Gu. Calreticulin expression in pregnancy and pre-eclampsia: its effects on microvascular cells. University of Melbourne. Supervisor Dr Neil Gude

Murnihayati Hassan. IGFBP1 and FSTL3 expression in human fetal growth restriction. University of Melbourne. Supervisors Dr Bill Kalionis, Dr Padma Murthi

Kate Hodgson. Adult blood pressure of extremely low birth weight survivors. University of Melbourne. Supervisor Prof Lex W Doyle

Eton Lim. Cardiovascular health in very low birth weight subjects in early adulthood. University of Melbourne. Supervisor Prof Lex W Doyle

Lucy McBride. Lung function and respiratory health of very low birth weight survivors in early adulthood. University of Melbourne. Supervisor Prof Lex W Doyle

Marianne Mok. Lung function and respiratory health of very low birth weight survivors in early adulthood. University of Melbourne. Supervisor Prof Lex W Doyle

Laura Papillo. Self-esteem, self-perceived health status, and health-related quality of life in very low birth weight young adults. University of Melbourne. Supervisor Prof Lex W Doyle

Charlotte Reddington. Adult lung function of extremely low birth weight survivors. University of Melbourne.
Supervisor Prof Lex W Doyle

Bonnie Swan. Proteoglycan decorin expression in human fetal growth restriction. University of Melbourne.
Supervisor Dr Padma Murthi

Melissa Vile. Exercise testing in very low birth weight, premature survivors in early adulthood. University of Melbourne.
Supervisor Prof Lex W Doyle

Azni Abdul Wahab. The effect of obesity on 11BetaHSD Type 1 expression in adipose tissue in pregnancy. University of Melbourne. Supervisor Dr Penny Sheehan

Sarah Wilkinson. Integrins & EMT signalling pathways implicated in breast cancer metastasis. Deakin University. Supervisors Dr Nuzhat Ahmed and A/Prof Leigh Ackland

Other undergraduate degrees

Lauren Astall, Bachelor of Social Work. University of Melbourne.
Supervisor Brenda Burgen

Hannah Dodwell, MB BS. Audit of gynaecological patients' analgesia. University of London attachment to Royal Women's Hospital. Supervisor Dr Philip Popham

PUBLICATIONS IN 2006

Refereed international journals

- Ahmed N**, Maines-Bandiera S, **Quinn MA**, Unger WG, Dedhar S, Auersperg N. Molecular pathways regulating EGF-induced epithelio-mesenchymal transition in human. *American Journal of Physiology Cell Physiology*; 290:1532-1542
- Al-Ghafra A, Gude NM, Brennecke SP**, King RG. Expression of adrenomedullin mRNA is altered with gestation and labour in human placenta and fetal membranes. *Clinical Science*; 110:337-342
- Al-Ghafra A, Gude NM, Brennecke SP**, King RG. Increased adrenomedullin protein content and mRNA expression in human fetal membranes but not placental tissue in pre-eclampsia. *Molecular Human Reproduction* 12: 181-186
- Ambalavanan N, Baibergenova A, Carlo WA, Saigal S, Schmidt B, Thorpe KE, and TIPP Investigators incl **Doyle LW**. Early prediction of poor outcome in extremely low birth weight infants by classification tree analysis. *Journal of Pediatrics* 148: 438-44
- Amir LH, Garland SM**, Lumley J. A case-control study of mastitis: nasal carriage of *Staphylococcus aureus*. *BMC Family Practice* 7:57
- Amir LH**, James JP, **Donath SM**. Reliability of the Hazelbaker Assessment tool for lingual frenulum function. *International Breastfeeding Journal* 1:3
- Aplin JD, Straszewski-Chavez SL, **Kalionis B**, Dunk C, Morrish D, Forbes K, Baczyk D, Roteg N, Malassineh A, Knofler M. Trophoblast differentiation: Progenitor cells, fusion and migration ~ a workshop report. *Placenta* 27:S141-3
- Beller U, Benedet JL, Creasman WT, Ngan HYS, **Quinn MA**, Maisonneuve P, Pecorelli S, Odicino F, Heintz APM. Carcinoma of the Vagina. FIGO 6th Annual Report on the Results of treatment in gynecological cancer. *International Journal of Gynecology and Obstetrics* 95:S29-S32
- Beller U, **Quinn MA**, Benedet JL, Creasman Wt, Ngan HYS, Maisonneuve P, Pecorelli S, Odicino F, Heintz APM Carcinoma of the vulva. FIGO 6th Annual Report on the Results of treatment in gynecological cancer. *International Journal of Gynecology and Obstetrics* 95:S7-S8
- Bradford R, Abdul Manan R, Daley AJ, Pearce C, Ramalingam A, D'mello D, Mueller Y, Uahwatanasaku W, Qu Y, Grando D, **Garland SM**, Deighton M. Coagulase-negative staphylococci in very low birth weight infants: inability of genetic markers to distinguish invasive strains from blood culture contaminants. *European Journal of Clinical Microbiology and Infectious Diseases* 25:283-290
- Bradshaw CS, Jensen SJ, **Tabrizi SN**, Read TRH, **Garland SM**, Hopkins CA, Moss LM, Fairley CK. Azithromycin Failure in *Mycoplasma genitalium* Urethritis. *Emerging Infectious Diseases* 12:1149-1152
- Bradshaw CS, Morton AN, Hocking J, **Garland SM**, Morris MB, Moss LM, Horvath L, Kuzevska I, Fairley CK. High recurrence rates of bacterial vaginosis over the course of 12 months after metronidazole therapy and factors associated with recurrence. *Journal of Infectious Diseases* 193:1478-1486
- Bradshaw CS, **Tabrizi SN**, Fairley CK, Morton AN, **Rudland E, Garland SM**. the association of *Atopobium vaginae* and *Gardnerella vaginalis* with bacterial vaginosis and recurrence following oral metronidazole: *Atopobium vaginae* and bacterial vaginosis. *Journal of Infectious Diseases* 194:828-836
- Bradshaw CS, **Tabrizi SN**, Read TRH, **Garland SM**, Hopkins CA, Moss LM, Fairley CK. Etiologies of non-gonococcal urethritis: bacteria, viruses and the association with oro-genital exposure. *Journal of Infectious Diseases* 193:336-345
- Brown DJ, Hill ST, **Baker HWG**. Male fertility and sexual function after spinal cord injury. *Progress in Brain Research* 152:427-39
- Brown N, Doyle LW**, Bear M, Inder TE. Alterations in neurobehavior at term reflect differing perinatal exposures in very preterm infants. *Pediatrics* 118:2461-2471
- Chandeying MD, **Garland SM, Tabrizi SN**. Prevalence and typing of Human Papillomavirus (HPV) among female commercial sex workers and outpatient women in Southern Thailand. *Sexual Health* 3:Nov-14
- Clarke GN**. Association between sperm autoantibodies and enhanced embryo implantation rates during in vitro fertilization. *Fertility and Sterility* 86:753-54
- Clarke GN, Liu DY, Baker HWG**. Recovery of human sperm motility and ability to interact with the human zona pellucida after more than 28 years of storage in liquid nitrogen. *Fertility and Sterility* 86:721-1
- Clarke GN**, McCoombe SG, **Short RV**. The sperm immobilizing properties of lemon juice. *Fertility and Sterility* 85:1529-30
- Creasman WT, Odicino F, Heintz APM. Carcinoma of the corpus uteri. FIGO 6th Annual Report on the Results of treatment in gynecological cancer. *International Journal of Gynecology and Obstetrics* 95:S105-S107
- Crowther CA, Haslam RR, Hiller JE, **Doyle LW**, Robinson J. Neonatal Respiratory Distress Syndrome after repeat exposure to antenatal corticosteroids – a randomised controlled trial. *Lancet* 365:1913-19
- Crowther CA, Haslam RR, Hiller JE, **Doyle LW**, Robinson J, for the ACTORDS Study Group. Neonatal respiratory distress after antenatal corticosteroids - Authors' reply (letter) *Lancet* 368:1066
- Davis PG, Morley CJ**. Volume control: a logical solution to volutrauma? *Journal of Pediatrics* 149:290-291
- Dawson JA, Davis PG, O'Donnell CP, Kamlin OF, Morley CJ**. Free-flow oxygen delivery to newly born infants. *Archives of Disease in Childhood* 92:F132-4
- Doherty VL, Rush AN, **Brennecke SP**, Moses EK. The ~ 56T HLA-G promoter polymorphism is not associated with pre-eclampsia/eclampsia in Australian and New Zealand women. *Hypertension in Pregnancy* 25:63-71
- Doyle LW, Davis PG, Morley CJ**, McPhee A, Carlin JB. Physiological doses of corticosteroids for premature infants: In reply (letter). *Pediatrics* 118:1317
- Doyle LW**, and the Victorian Infant Collaborative Study Group. Respiratory function at age 8-9 Years in extremely low birthweight/very preterm children born in Victoria in 1991-92. *Pediatric Pulmonology* 41:570-576
- Doyle LW, Davis PG, Morley CJ**, McPhee A, Carlin J, the Dart Study Investigators. Low-dose dexamethasone facilitates extubation among chronically ventilator-dependent infants: a multicenter, international, randomized, controlled trial. *Pediatrics* 117:75-83
- Doyle LW, Davis PG, Morley CJ**, McPhee A, Carlin JB. Reopening the Debate on Corticosteroids: In reply (letter). *Pediatrics* 117:2322-2323

Doyle LW, Faber B, Callanan C, Freezer N, Ford GW, Davis NM. Bronchopulmonary dysplasia in very low birth weight subjects and lung function in late adolescence. *Pediatrics* 118:108-113

East CE, **Brennecke SP, King JF,** Chan FY, Colditz PB, FOREMOST Study Group. The effect of intrapartum fetal pulse oximetry, in the presence of a nonreassuring fetal heart rate pattern, on operative delivery rates: a multicenter, randomized, controlled trial (the FOREMOST trial). *American Journal of Obstetrics and Gynecology* 94:606, e1-16

East CE, Chan FY, **Brennecke SP, King JF,** Colditz PB. Women's evaluations of their experience in a multicenter randomised controlled trial of intrapartum fetal pulse oximetry (the FOREMOST trial). *Birth* 33:101-109

East CE, Gascoigne MB, Doran CM, **Brennecke SP,** King JF, Colditz PB. A cost-effectiveness analysis of the intrapartum fetal pulse oximetry multicentre randomised controlled trial (the FOREMOST trial). *British Journal of Obstetrics and Gynaecology* 113:1080-1087

Forster DA, Denning A, Wills G, Bolger M, McCarthy E. Herbal medicine use during pregnancy in a group of Australian women. *BMC Pregnancy and Childbirth* 6:21

Forster DA, McLachlan H, Lumley J. Factors associated with breastfeeding at six months postpartum in a group of Australian women. *International Breastfeeding Journal* 1:18

Forster DA, McLachlan HL, Yelland J, Rayner J, Lumley J, Davey M. Staffing in postnatal units: is it adequate for the provision of quality care? Staff perspectives from a state-wide review of postnatal care in Victoria, Australia. *BMC Health Services Research* 6:83

Fraser C, James EL, Anderson K, Lloyd D, **Judd FK.** Intervention programs for children of parents with a mental illness: A critical review. *International Journal of Mental Health Promotion* 8:Jun-16

Frawley HC, Galea MP, Phillips BA, **Sherburn M,** Bo K. Effect of test position on pelvic floor muscle assessment. *International Urogynecology Journal and Pelvic Floor Dysfunction* 17:365-371

Frawley HC, Galea MP, Phillips BA, **Sherburn M,** Bo K. Reliability of pelvic floor muscle strength assessment using different test positions and tools. *Neurourology and Urodynamics* 25:236-242

Gardner A, Currie MJ, **Garland SM, Tabrizi SN,** Bowden FJ. Assessment of MagNA Pure LC Extraction system for Detection of Human Papillomavirus (HPV) DNA in PreservCyt Samples by the Roche AMPLICOR and LINEAR ARRAY HPV Tests. *Journal of Clinical Microbiology* 44:2428-2433

Garland SM. An open-label Phase II pilot investigating the optimal duration of Imiquimod 5% cream for the treatment of external genital warts in women. *International Journal of STD and AIDS* 17:448-452

Gibbie T, Mijch AM, Ellen S, Joy J, Hutchinson C, Wright E, Chua P, **Judd FK.** Depression and neurocognitive performance in individuals with HIV/AIDS: two year follow up. *HIV Medicine* 7:112-121

Gook D, Hale L, Edgar D. Live birth following transfer of a cryopreserved embryo generated from a cryopreserved oocyte and a cryopreserved sperm: case report. *Journal of Assisted Reproduction and Genetics* 24:43-45

Gunn J, Hegarty K, Nagle C, **Forster DA,** Brown S, Lumley J. Putting woman-centred care into practice: a new approach to psychosocial risk assessment during pregnancy: health professional views and outcomes. *Birth* 33:46-55

Haddow LJ, Sullivan EA, Taylor J, Abel M, Cunningham AL, **Tabrizi SN,** Mindel A. Herpes simplex virus type 2 (HSV -2) infection in women attending antenatal clinics in Vanuatu. *Sexually Transmitted Diseases* 34:258-61

Halamek LP, **Morley C.** Continuous positive airway pressure during neonatal resuscitation. *Clinics in Perinatology* 33:83-98

Harrison ML, Hoskins P, du Bois A, **Quinn M,** Rustin GJ, Ledermann JA, Baron-Hay S, Friedlander ML. Small cell of the ovary, hypercalcemic type – analysis of combined experience and recommendation for management. A GCIG study. *Gynecologic Oncology* 100:233-238

Heintz APM, Odicino F, Maisonneuve P, **Quinn MA,** Benedet JL, Creasman WT, Ngan HYS, Pecorelli S, Beller U. Carcinoma of the fallopian tube. FIGO 6th Annual Report on the results of treatment in gynecological cancer. *International Journal of Gynecology and Obstetrics* 95:S145-S146

Heintz APM, Odicino F, Maisonneuve P. **Quinn MA,** Benedet JL, Creasman WT, Ngan HYS, Pecorelli S, Beller U. Carcinoma of the ovary. FIGO 6th Annual Report on the results of treatment in gynaecological cancer. *International Journal of Gynaecology and Obstetrics* 95:S162-S163

Higgins RD, Raju TN, Perlman J, Azzopardi DV, Blackmon LR, Clark RH, Edwards AD, Ferriero DM, Gluckman PD, Gunn AJ, **Jacobs SE,** Eicher DJ, Jobe AH, Laptook AR, LeBlanc MH, Palmer C, Shankaran S, Soll RF, Stark AR, Thoresen M, Wyatt J. Hypothermia and perinatal asphyxia: executive summary of the NICHD workshop. *Journal of Pediatrics* 148:170-175

Hocking J, Willis J. **Tabrizi SN,** Fairley CK, **Garland SM,** Hellard M. A Chlamydia Prevalence survey of young women living in Melbourne. *Sexual Health* 3:235-240

Jayasinghe Y, **Garland SM.** Genital warts in children: what do they mean? *Archives of Disease in Childhood* 91:696-700

Judd FK, Jackson H, Fraser C, Murray G, Robins G, Komiti A. Understanding suicide in Australian farmers. *Social Psychiatry and Psychiatric Epidemiology* 41:1-Oct

Kamlin COF, O'Donnell CPF, Davis PG, Morley CJ. Predicting successful extubation of very low birth weight infants. *Archives of Disease in Childhood* 91:F180-F183

Kamlin COF, O'Donnell CPF, Everest NJ, Davis PG, Morley CJ. Accuracy of clinical assessment of infant heart rate in the delivery room. *Resuscitation* 71:319-321

Kamlin COF, O'Donnell CPF, Davis PG, Morley CJ. Oxygen saturation in healthy infants immediately after birth. *Journal of Pediatrics* 148:585-589

Klimek J, Morley CJ, Lau R, Davis PG. Does measuring respiratory function improve neonatal ventilation? *Journal of Paediatrics and Child Health* 42:140-142

Komiti A, **Judd FK,** Jackson H. The influence of stigma and attitudes on seeking help from a GP for mental health problems – a rural context. *Social Psychiatry and Psychiatric Epidemiology* 41:738-745

Konstantakopoulos N, Montgomery KG, Chamberlain N, **Quinn MA**, Baker MS, **Rice GE**, Georgiou HM, Campbell IG. Changes in gene expression elicited by physiological concentrations of genistein on human endometrial cancer cells. *Molecular Carcinogenesis* 45:752-763

Leach L, Badet J, Brownbill P, Harris L, Keogh R, **Kalionis B**, Whitley G. Endothelium, blood vessels and angiogenesis: a workshop report. *Placenta* 27:S16-9

Lister NA, Smith A, **Tabrizi SN**, **Garland SM**, Fairley C. Re-infection of *Neisseria gonorrhoeae* and *Chlamydia trachomatis* infections among men who have sex with men. *International Journal of STD and AIDS* 17:415-417

Liu DY, **Clarke GN**, **Baker HWG**. Hyperosmotic condition enhances protein tyrosine phosphorylation and zona pellucida binding capacity of human spermatozoa. *Human Reproduction* 21:745-52

Liu DY, **Clarke GN**, **Baker HWG**: Tyrosine phosphorylation on capacitated human sperm tail detected by immunofluorescence correlates strongly with sperm-zona pellucida (ZP) binding but not with the ZP-induced acrosome reaction. *Human Reproduction* 21:1002-8

Liu DY, **Garrett C**, **Baker HWG**. Acrosome-reacted human sperm in insemination medium do not bind to the zona pellucida of human oocytes. *International Journal of Andrology* 29:475-81

Lum G, **Garland SM**, **Tabrizi SN**, Harnett G, Smith DW, Sloots TP, Whitley DM, Tapsall JW. Supplemental testing is still required in Australia for samples positive for *Neisseria gonorrhoeae* by nucleic acid detection tests (authors' reply). *Journal of Clinical Microbiology* 44:4292-4294

Markovic M, Manderson L, Schaper H, **Brennecke S**. Maternal identity change as a consequence of antenatal hospitalisation. *Health Care for Women International* 27:762-76

Markovic M, Manderson L, Wray N, **Quinn MA**. Complementary medicine use by Australian women with gynaecological cancer. *Psycho-Oncology* 15:209-220

McBain J. (2006) Impact of improvement in implantation rates and reduction in the frequency of double embryo transfer in fresh and frozen cycles at Melbourne IVF between 2000 and 2005. *Australia and New Zealand Journal of Obstetrics and Gynaecology*; 46(Suppl 1):S19.

McLachlan HL, **Forster DA**. Initial breastfeeding attitudes and practices of women born in Turkey, Vietnam and Australia after giving birth in Australia. *International Breastfeeding Journal* 1:7

Mijch A, Burgess P, **Judd F**, Grech P, Komiti A, Hoy J, Lloyd JG, Gibbie T, Street A. Increased health care utilisation and increased ARV use in HIV infected individuals with mental health disorders. *HIV Medicine* 7:205-212

Monagle P, Barnes C, Ignjatovic V, Furmedge J, Newall F, Chan A, De Rosa L, Hamilton S, Ragg P, Robinson S, Auldist A, Crock C, **Roy N**, **Rowlands S**. Developmental haemostasis. Impact for clinical haemostasis laboratories. *Thrombosis and Haemostasis* 95:362-272

Moses EK, Fitzpatrick E, Freed KA, Dyer TD, Forrest S, Elliott K, Johnson MP, Blanagero J, **Brennecke SP**. Objective prioritization of positional candidate genes at a quantitative trait locus for pre-eclampsia on 2q22. *Molecular Human Reproduction* 12:505-512

Murthi P, Doherty V, Said J, Donath S, Brennecke SP, Kalionis B. Homeobox gene HLX1 expression is decreased in idiopathic human fetal growth restriction. *American Journal of Pathology* 168:511-518

Murthi P, Doherty VL, **Said J**, **Donath S**, **Brennecke SP**, **Kalionis B**. Homeobox gene ESX1L expression is decreased in pre-term human idiopathic fetal growth restriction. *Molecular Human Reproduction* 12:335-340

Murthi P, Kalionis B, Ghabrial H, Dunlop ME, Smallwood RA, Sewell RB. Kupffer cell function during the erythrocytic stage of malaria. *Journal of Gastroenterology and Hepatology* 21:313-318

Murthi P, **Said JM**, Doherty VL, **Donath S**, **Nowell CJ**, **Brennecke SP**, **Kalionis B**. Homeobox gene DLX4 expression is increased in idiopathic human fetal growth restriction. *Molecular Human Reproduction* 12:763-769

Nesbitt GS, Smye M, Sheridan B, Lappin TRJ, Trimble ER, for the HAPO Co-operative Research Group (**Oats JJB** Study Regional Director). Integration of local and central laboratory functions in a worldwide multicentre study. Experience from the Hyperglycemia and Adverse Pregnancy Outcome (HAPO) Study. *Clinical Trials* 3:397-407

Ngan HYS, Odicino F, Maisonneuve P, Creasman WT, Beller U, **Quinn MA**, Heintz APM, Pecorelli S, Benedet JL. Gestational trophoblastic neoplasia. *International Journal of Gynaecology and Obstetrics* 95:S192-S195

O'Donnell CPF, **Morley CJ**. Paralyzed right hemidiaphragm in a newborn infant. *Pediatrics* 149:730

O'Donnell CPF, **Kamlin COF**, **Davis PG**, **Carlin JG**, **Morley CJ**. Interobserver variability of the five-minute Apgar score. *Journal of Pediatrics* 149:486-489

O'Donnell CPF, **Kamlin COF**, **Davis PG**, **Morley CJ**. Endotracheal intubation at neonatal resuscitation: success rates, duration of attempts and adverse events. *Pediatrics* 117:e16-e21

Okamoto A, Endo H, **Kalionis B**, Shinya M, Saito M, Nikaido T, Tanaka T. IGFBP1 and Follistatin-like 3 genes are significantly up-regulated in expression profiles of the IUGR placenta. *Placenta* 27:317-321

O'Keefe E. Prevalence of genital human papillomavirus DNA in a sample of senior school-aged women in the Australian Capital Territory. *Sexual Health* 3:91-93

O'Keefe E, Gardner A, Currie MJ, **Garland SM**, **Tabrizi SN**, Bowden FJ. Prevalence of genital human papillomavirus DNA in a sample of senior school-aged women in the Australian Capital Territory. *Sexual Health* 3:91-93

Paracchini S, Thomas A, Castro S, Lai C, Paramasivam M, Wang Y, Keating BJ, Taylor JM, **Hacking DF**, Scerri T, Francks C, Richardson AJ, Wade-Martins R, Stein JF, Knight JC, Copp AJ, LoTurco J, Monaco AP. The chromosome 6p22 haplotype associated with dyslexia reduces the expression of KIAA0319, a novel gene involved in neuronal migration. *Human Molecular Genetics* 15:1659-1666

Pirotta MV, **Garland SM**. Genital *Candida* species detected in samples from women in Melbourne Australia, before and after treatment with antibiotics. *Journal of Clinical Microbiology* 44:3213-3217

Quinn MA, Benedet JL, Odicino F, Maisonneuve P, Beller U, Creasman WT, Heintz APM, Ngan HYS, Pecorelli S. Carcinoma of the Cervix Uteri. FIGO 6th Annual Report on the Results of treatment in gynaecological cancer. *International Journal of Gynaecology and Obstetrics* 95:S43-S46

Quint GV, Pagliusi SR, Lelie N, de Villiers EM, Wheeler CM, and the WHO Human Papillomavirus DNA Int Collaborative Study Group. Results of the first World Health Organisation International collaborative study of detection of Human Papillomavirus DNA. *Journal of Clinical Microbiology* 44:571-579

Rudland E, Garland SM, Tabrizi SN. Human Papillomavirus genotyping using a modified linear array detection protocol. *Journal of Virological Methods* 135:124-126

Said JM, Brennecke SP, Moses EK, Walker SP, Borg AJ, Higgins JR. Ethnic differences in the prevalence of inherited thrombophilia polymorphisms in an Australian antenatal population. *Human Biology* 78:403-412

Schmidt B, Roberts RS, **Davis P, Doyle LW,** Barrington KJ, Ohlsson A, Solimano A, Tin W, for the Caffeine for Apnea of Prematurity Trial Group. Caffeine therapy for apnea of prematurity. *New England Journal of Medicine* 354:2112-21

Schmidt B, Roberts RS, Fanaroff A, **Davis P,** Kirpilani HM, Nwaesei C, Vincer M and TIPP investigators (incl **Doyle L**). Indomethacin prophylaxis, patent ductus arteriosus, and the risk of bronchopulmonary dysplasia: further analyses from the Trial of Indomethacin Prophylaxis in Preterms (TIPP). *Journal of Pediatrics* 148:730-734

Seshadri T, **Gook D,** Lade S, Spencer A, Grigg A, Tiedemann K, McKendrick J, Michell P, **Stern C,** Seymour J. Lack of evidence of disease contamination in ovarian tissue harvested for cryopreservation from patients with Hodgkin's Lymphoma and analysis of factors predictive of oocyte yield. *British Journal of Cancer* 94:1007-1010

Shah DK, Lavery S, **Doyle LW,** Wong C, McDougall P, Inder TE. Use of 2-channel bedside electroencephalogram monitoring in term-born encephalopathic infants related to cerebral injury defined by magnetic resonance imaging. *Pediatrics* 118:47-55

Simcock B, Neesham D, **Quinn MA,** Drummond E, Milner A, Hicks RH. The impact of PET/CT in management of recurrent ovarian cancer. *Gynaecologic Oncology* 102:271-276

Stern CJ, Toledo MG, **Gook DA** and Seymour JF. (2006) Fertility preservation in female oncology patients. *Australia and New Zealand Journal of Obstetrics and Gynaecology*; 46(1):15-23.

Stern C, Seymour J. Defining the cost of cure: infertility among female survivors of lymphoma. *Leukemia and Lymphoma* 47:574-575

Stevens MP Human papillomavirus genotype prevalence in cervical biopsies from women diagnosed with cervical intraepithelial or cervical cancer in Melbourne, Australia. *International Journal of Gynaecological Cancer* 6:017-1024

Stevens MP. Prevalence of Gardnerella vaginalis and Atopobium vaginae in vaginal women. *Sexually Transmitted Diseases* 3:63-5

Stevens MP, **Rudland E, Garland SM, Tabrizi SN.** Assessment of MagNA Pure LC Extraction system for Detection of Human Papillomavirus (HPV) DNA in PreservCyt Samples by the Roche AMPLICOR and LINEAR ARRAY HPV Tests. *Journal of Clinical Microbiology* 44:2428-2433

Stevens MP, **Tabrizi SN, Garland SM.** Human Papillomavirus genotyping using a modified linear array detection protocol. *Journal of Virological Methods* 135:124-126

Stevens MP, **Tabrizi SN, Quinn MA, Garland SM.** Human papillomavirus genotype prevalence in cervical biopsies from women diagnosed with cervical intraepithelial or cervical cancer in Melbourne, Australia. *International Journal of Gynaecological Cancer* 16:1017-1024

Tabrizi S, Fairley C, Bradshaw C, **Garland SM.** Prevalence of Gardnerella vaginalis and Atopobium vaginae in vaginal women. *Sexually Transmitted Diseases* 33:663-5

Tabrizi SN, Frazer I, **Garland SM.** Serologic response to human papillomavirus 16 among Australian women with high-grade cervical intraepithelial neoplasia. *International Journal of Gynaecological Cancer* 16:1032-1035

Tabrizi SN, Pirota MV, **Rudland E, Garland SM.** Detection of Candida species by PCR in self-collected vaginal swabs of women after taking antibiotics (letter to Editor). *Mycoses* 49:523-524

Tingay DG, Mills JF, **Morley CJ,** Pellicano A, Dargaville P. The deflation limb of the pressure-volume relationship in infants during high frequency ventilation. *American Journal of Respiratory and Critical Care Medicine.* 173:414-420

Weisberg E, Hickey M, **Palmer D,** O'Connor V, Salamonsen LA, Findlay JK, Fraser IS. A pilot survey to assess the effects of three short term treatments on frequent and/or prolonged bleeding compared to placebo in women using Implanon.. *Human Reproduction* 21:295-302

Wood BR, Bambery KR, Evans CJ, **Quinn MA,** McNaughton D. A three-dimensional multivariate image processing technique for the analysis of FTIR spectroscopic images of multiple tissue sections. *BMC Medical Imaging.* 6:12

Yelland J, McLachlan H, **Forster DA,** Rayner J, Lumley J. How is maternal psychosocial health assessed and promoted in the early postnatal period? Findings from a review of hospital postnatal care in Victoria, Australia. *Midwifery* Nov-18

Review articles in international journals

Doyle LW. The burden of illness in perinatal and neonatal care: the epidemiologist's role. *Seminars in Fetal and Neonatal Medicine* 11:69-72

Doyle LW. Perinatal and neonatal epidemiology. *Seminars in Fetal and Neonatal Medicine* 11:67

Doyle LW. Evaluation of neonatal intensive care for extremely low birthweight infants *Seminars in Fetal and Neonatal Medicine* 11:139-145

Garland SM, Tabrizi S. HPV DNA testing: potential clinical applications. *Journal of the International Union for Health Promotion and Education* 44:107-112

Mishra UK, Jacobs SE, Doyle LW, Garland SM. Newer approaches to the diagnosis of early onset neonatal sepsis. *Archives of Disease in Childhood* 91:F208-F212

O'Donnell CPF, Gibson AT, **Davis PG.** Pinching, electrocution, ravens' beaks, and positive pressure ventilation: a brief history of neonatal resuscitation. *Archives of Disease in Childhood* 91:F369-373

Rice G, Georgiou H, **Ahmed N,** Shi G, Kruppa G. Translational Proteomics: developing a predictive capacity. *Placenta, Supplement A,* S76-86.

Stern C, Chamley L. Antiphospholipid antibodies and coagulation defects in women with implantation failure after IVF and recurrent miscarriage. *Reproductive Biomedicine Online* 13:29-37

Australian refereed journals

Amir LH, Lumley J. Women's experience of lactational mastitis: "I have never felt worse". *Australian Family Physician* 35:745-747

Amir LH. Breastfeeding: managing 'supply' issues. *Australian Family Physician* 35:686-689

East CE, **Brennecke SP**, Chan FY, King JF, Beller EM. Clinicians' evaluations of fetal oximetry sensor placement in a multicentre randomised trial (the FOREMOST trial). *Australian and New Zealand Journal of Obstetrics and Gynecology* 46:235-240

Endacott R, **Judd FK**, Cornett M, Kidd SM, Menzel M. Developing new services for eating disorders: an evaluation study. *Australasian Psychiatry* 14:57-62

Endacott R, Wood A, **Judd FK**, Hulbert C, Thomas B, Grigg M. Impact and management of dual relationships in metropolitan, regional and rural mental health practice. *Australian and New Zealand Journal of Psychiatry* 40:987-994

Garland SM, **Ung L**, Vuljovic OV, Said JM. Cosmetic tattooing: a potential transmission route for HIV? *Australian and New Zealand Journal of Obstetrics and Gynaecology* 46:458-459

Giles M, **Garland SM**. A study of women's knowledge regarding human papillomavirus infection, cervical cancer and human papillomavirus vaccines. *Australian and New Zealand Journal of Obstetrics and Gynecology* 46:311-315

Giles ML, Giles ML, **Garland SM**, Grover SR, Lewin SM, Hellard ME. Impact of an education campaign on the management in pregnancy of women infected with a blood-borne virus. *Medical Journal of Australia* 184:389-342

Griffiths J, McCutcheon C, Silvert B, Maruff P. A prospective observational study of the effect of night duty on the cognitive function of anaesthetic registrars. *Anaesthesia and Intensive Care* 34:621-628

Heath JA, **Stern CJ**. Fertility preservation in children newly diagnosed with cancer: existing standards of practice in Australia and New Zealand *Medical Journal of Australia* 185:538-541

James EL, Fraser C, Anderson K, **Judd FK**. Use of research by the Australian Health Promotion Workforce. *Health Education Research* 22:576-587

Judd FK. Progressing the agenda for rural mental health research. Invited Editorial. *Rural and Remote Health* 6:615

Judd FK, Jackson H, Komiti A, Murray G, Fraser C, Grieve A, Gomez R. Helpseeking by rural residents for mental health problems: the importance of agrarian values. *Australian and New Zealand Journal of Psychiatry* 40:769-776

Judd FK, Cooper A, Davis J, Fraser C. Rural suicide: people or place effects? *Australian and New Zealand Journal of Psychiatry* 40:208-219

Kerkmeijer L, Wielsma S, Bekkers R, Pyman J, **Tan J**, **Quinn M**. Guidelines following hydatidiform mole: a reappraisal. *Australian and New Zealand Journal of Obstetrics and Gynecology* 46:112-118

Markovic M, Manderson L, **Quinn M**. Treatment decisions: a qualitative study with women with gynaecological cancer. *Australian and New Zealand Journal of Obstetrics and Gynecology* 46:46-48

McBain J. Impact of improvement in implantation rates and reduction in the frequency of double embryo transfer in fresh and frozen cycles at Melbourne IVF between 2000 and 2005. *Australian and New Zealand Journal of Obstetrics and Gynecology* 46:S19

McCarthy FP, **Rowlands S**, Giles M. Tuberculosis in pregnancy: case studies and a review of Australia's screening process. *Australian and New Zealand Journal of Obstetrics and Gynecology* 46:451-455

Morley R, **Umstad MP**, Bond J, Moore VM, Owens JA, Dwyer T, Carlin JB. Maternal dietary intake in twin pregnancies: does it diminish towards term? *Australian and New Zealand Journal of Obstetrics and Gynaecology* 46:458-459

Nankervis AJ, Conn JJ, Knight RL. Obesity and reproductive health. *Medical Journal of Australia* 184:51

Nimmo GR, Coombs GW, Pearson JC, O'Brien FG, Christiansen KJ, Turnidge JD, Gosbell IB, Collignon P, Collignon ML on behalf of the Aust Group for Antimicrobial Resistance **Garland SM**. Methicillin-resistant *Staphylococcus Aureus* in the Australian community: an evolving epidemic. *Medical Journal of Australia* 184:384-388

Panaretto KS, Dallachy D, Manassis V, Tabrizi S, Upcroft J, **Garland SM**. Cervical Smear participation and prevalence of sexually transmitted infections in urban Aboriginal and Torres Strait Islander women in Queensland. *Australian and New Zealand Journal of Public Health* 30:171-176

Sheehan PM. A possible role for progesterone metabolites in human parturition. *Australian and New Zealand Journal of Obstetrics and Gynaecology* 46:159-163

Stern CJ, Toledo MG, **Gook DA**, Seymour JF. Fertility preservation in female oncology patients. *Australian and New Zealand Journal of Obstetrics and Gynaecology* 46:15-23

Non-refereed international journals

Garland SM. AOGIN inaugural meeting: report. *HPV Today* 8:11

Non-refereed Australian journals

D'Arcy M. Family violence reform: the whole package. *Law Institute Journal*

Doyle LW. Intensive care for the tiniest babies: is it worth it? (Deans Lecture Series). *Chiron - Journal of the University of Melbourne Medical Society* 5:12-13

Garland SM. AOGIN inaugural meeting: conference report. *Sexual Health* 8

Book chapters

Ahmed N. Role of integrins in ovarian cancer in *Handbook of Immunohistochemistry and in situ hybridization of human carcinomas*. Volume 4, pages 425-439

Garland SM, **Quinn MA**. How to manage and communicate with patients about HPV. *International Journal of Gynaecology and Obstetrics* 90:S104-S110

Garland SM. Chapter Review: Genital (reproductive) tract infections. *Therapeutic Guidelines - Antibiotics* 12

Giles M, **Garland SM**. (Chapter 21) Papillomavirus research: from natural history to vaccines and beyond. *HPV Vaccines* 21:341-356

INVITED PRESENTATIONS IN 2006

Invited international presentations

Prof Shaun Brennecke

38th International Congress of Organization Gestosis. Adelaide. March 2006.

Human Reproductive Health through the Ages, Congress. Adelaide. March 2006

First Chinese National Obstetric Critical Care Conference. Shanghai, China. October 2006

XVIII FIGO World Congress of Gynaecology and Obstetrics. Kuala Lumpur, Malaysia. November 2006

Brenda Burgen

International Association for the Scientific Study of Intellectual Disabilities Maastricht Uni, Netherlands. August 2006

Prof Lex Doyle

38th International Congress of Organization Gestosis, Adelaide. March 2006.

New Zealand Association of Neonatal Nurses Annual General Meeting, Wellington, NZ. September 2006

Eric Burnard Memorial Trust Meeting, Wellington, NZ. September 2006

Perinatal Society of New Zealand Annual General Meeting, Wellington, NZ. September 2006

Annual Reporting Day, National Women's Hospital, Auckland, NZ. September 2006

Dr David Edgar

International College of Surgeons, Singapore. April 2006

2nd International Conference on Cryopreservation of the Human Oocyte. Bologna, Italy. October 2006

Prof Suzanne M Garland

International Society for the Study of Vulvo Vaginal Disease, Auckland NZ. February 2006

EUROGIN 2006 Conference, Paris, France. April 2006

The Royal Society of Medicine, London, UK. May 2006

New Zealand Venereological Society Conference, Auckland, NZ. July 2006

Japanese Society of Obstetrics & Gynaecology, Japan. July 2006

International Union against Sexually Transmitted Infections (IUSTI) World Conference Kuala Lumpur, Malaysia. July 2006

2nd Inaugural AOGIN Conference Cebu, Philippines. September 2006

Federation of Gynecology and Obstetrics (FIGO) Kuala Lumpur, Malaysia. November 2006

Dr Debra Gook

Fertility Society of Australia Annual Scientific Meeting Symposium. Sydney. October 2006

Dr Susan Jacobs

South African Paediatric Association Congress - All 4 kids. Sun City, South Africa. September 2006

Hot Topics in Neonatology, Washington DC, USA. December 2006

Prof Colin Morley

Improving the resuscitation of premature babies, New York, USA. April 2006

UK Hot Topics in Neonatology, London, UK. September 2006

Hot Topics in Neonatology, Washington DC, USA. December 2006

Dr Padma Murthi

12th International Federation of Placental Association, Kobe, Japan. September 2006

Prof Michael Quinn

International Meeting on Sexual Health, Chiang Mai, Thailand. February 2006

Ethics in Reproduction, Warwick, UK. April 2006

HPV Update, London, UK. May 2006

Update in Ovarian Cancer, Kagoshima, Japan. June 2006

Asia-Oceania Research Organisation in Genital Infection and Neoplasia - Biennial Meeting, Cebu, Philippines. September 2006

International Gynecological Cancer Society Santa Monica, USA. October 2006

International Federation of Gynecology and Obstetrics (FIGO), Kuala Lumpur, Malaysia. November 2006

Dr Joanne Said

38th International Congress of Organization Gestosis, Adelaide. March 2006

Invited Australian presentations

Dr Nuzhat Ahmed

97th Annual meeting for the American Association for Cancer Research, Washington DC. April 2006

Dr Andrew Buettner

National Institute of Clinical Studies, Using Evidence: Using Guidelines Symposium, Melbourne. October 2006

Brenda Burgen

Forum on working with parents with intellectual disability for MCHN and Community Agencies, Tweddle Early Parenting Centre, Melbourne. June 2006

Training for PAS on working with women with intellectual disability and informed consent issues, Royal Women's Hospital, Melbourne. September 2006

Parenting forum presentation on new resources and study tour, Anglicare, Yarraville, Melbourne. October 2006

Parenting forum presentation on new resources and study tour. Department of Human Services, Preston, Melbourne. December 2006

Dr David Edgar

Fertility Society of Australia Annual Scientific Meeting Symposium, Sydney. October 2006

Prof Suzanne M Garland

Australasian Sexual Health Conference, Melbourne. October 2006

Australian Institute of Medical Scientists National Scientific Meeting, Hobart. October 2006

Centres for Disease Control and Prevention (CDC) Conference, Alice Springs. November 2006

Dr Susan Jacobs

Neonatal Nurses Assoc of Queensland, State Conference, Brisbane. August 2006

Dr Rachel Knight

Australian College of Dermatologists, Melbourne. May 2006

Prof Jeremy Oats

Australian Society for Psychosocial Obstetrics & Gynaecology (ASPOG) National Evidence based Guidelines in Antenatal Care, Sydney. August 2006

Diabetes 2020 Contraception and Diabetes, Melbourne. November 2006

Women's Hospitals Australia (WHA): National Evidence-based Guidelines in Antenatal Care, Launceston. November 2006

Australian College of Midwives Incorporated (ACMI) National Evidence-based Guidelines in Antenatal Care, Sydney. December 2006

Dr Diane Palmer

Annual Women's Health update for General Practitioners, Melbourne University. March 2006

Prof Michael Quinn

Monash Farewell Meeting for Mr Arthur Day, Melbourne. July 2006

Clinical Oncology Society of Australia (COSA), Melbourne. November 2006

Dr Shelley Rowlands

An update on prenatal testing for fetal abnormalities, Royal Children's Hospital, Melbourne. November 2006

Dr Kate Stern

Adolescent and Young Adult Cancer Education Day, Peter MacCallum Hospital, Melbourne. March 2006

Polycystic Ovarian Syndrome Health, Peninsula Women's Hospital, Victoria. July 2006

University of Melbourne Department of Obstetrics & Gynaecology, Royal Women's Hospital, Melbourne. August 2006

Clinical Oncological Society of Australia, Australian Health and Medical Research Congress, Melbourne. November 2006

A/Prof Sepehr Tabrizi

Australasian Sexual Health National Conference, Melbourne. October 2006

Annual National Reference Laboratory Conference, Melbourne. October 2006

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